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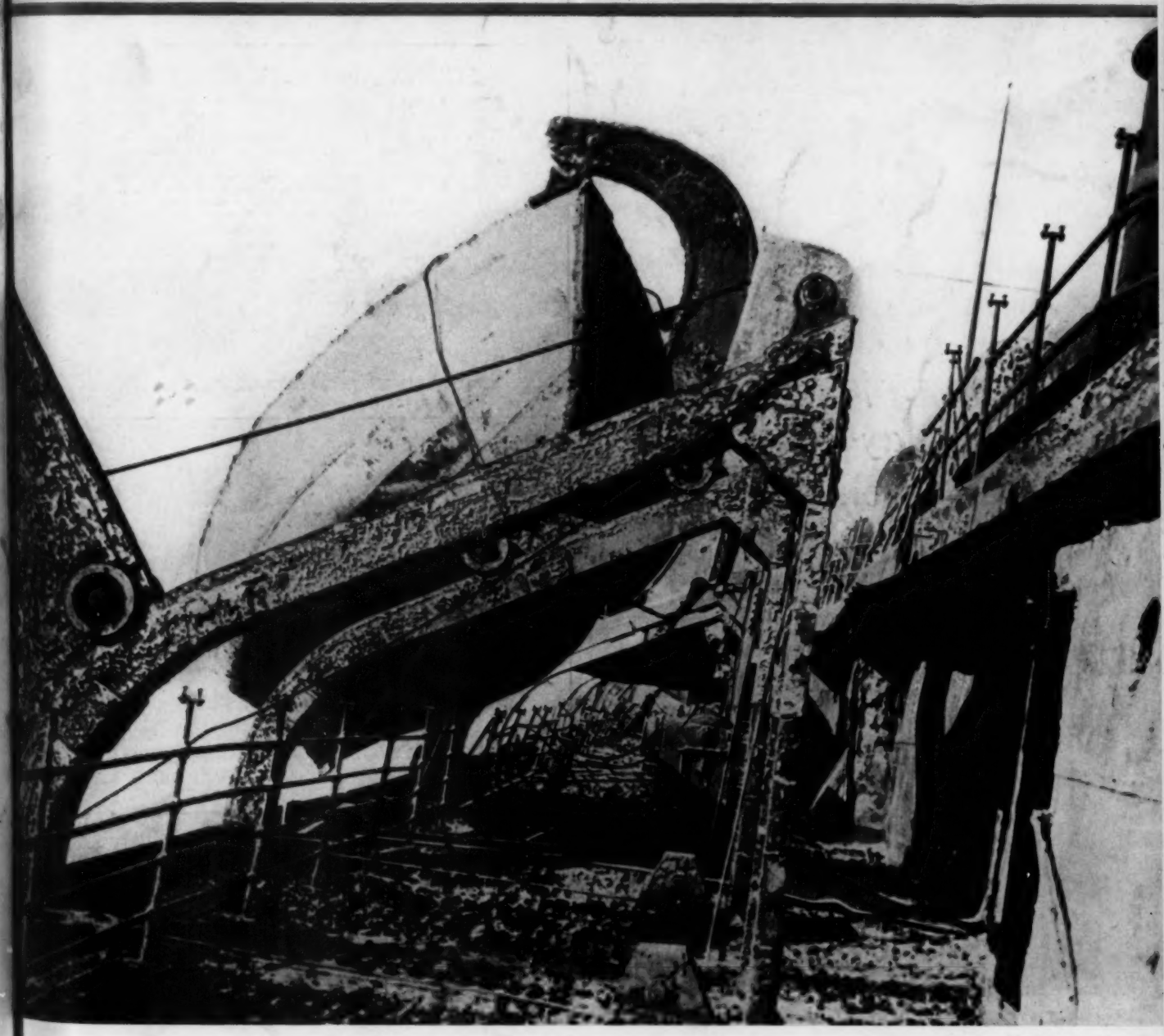
The Journal of the Fire Protection Profession Since 1877

Vol. 87, No. 10 OCTOBER, 1934 Member A.B.C.—A.B.P.



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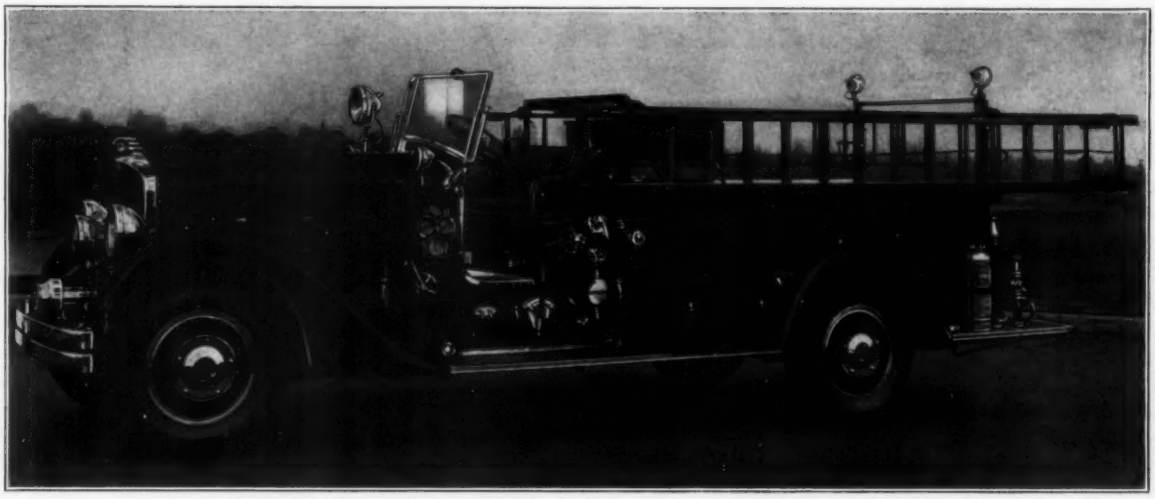

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On the Way Up

FIGURES issued by the U. S. Department of Commerce give good evidence that the motor fire apparatus industry, for one, is beginning to come back to life.

● Based on data received from practically all of the manufacturers, the statistics show an increase of 33⅓% in the number of pieces of motor fire apparatus shipped during the first eight months of this year as compared with the same period of last year. August alone was more than 100% ahead of August 1933, and nearly 50% better than July 1934, which clearly indicates that the trend is definitely upward. It is interesting to note that pumpers represented practically 90% of the equipment shipped.

● The way things look now, with fire departments everywhere reaching a point where replacement of worn-out apparatus is essential, the coming year should see a volume of buying far surpassing this year.

The Publishers

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Humorous Side of the Fire-Fighting Profession

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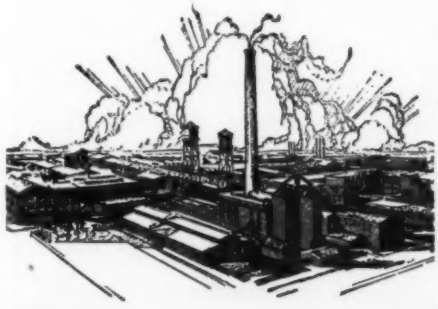

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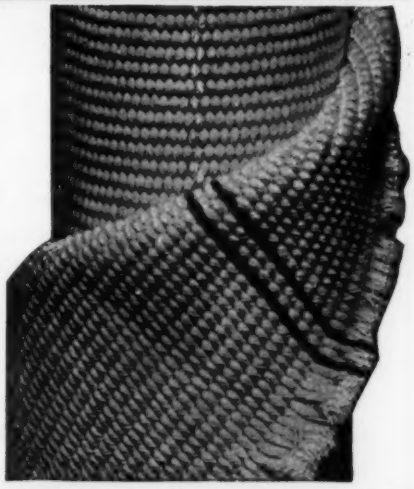

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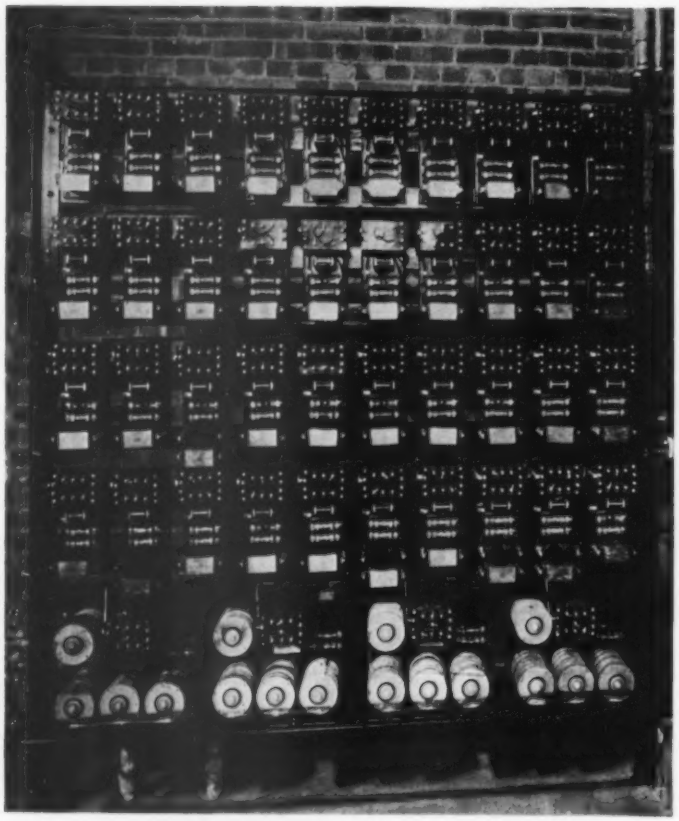

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The Journal of the Fire Protection Profession

Volume 87 OCTOBER, 1934 Number 10

With the Editor

Lessons of a Drought Many Western Fire Departments have learned a lot this past summer about drought problems. Fires, which normally would have been considered of no consequence, became problems of the first magnitude. Water supplies normally copious were found wanting. Brush and forest fires outside the limits of the city and normally of no concern to the Fire Department suddenly became problems entailing imminent danger to the city.

A long period of high temperatures, with little or no rainfall, sets the stage for fast fires. Wooden buildings dry out, wood shingles become readily ignitable, and grass and brush fires spread with astounding rapidity.

To make matters worse, water supply may be reduced to such a point that it is insufficient to handle the large, fast traveling blaze.

The danger point has about passed for this year, but there's no assurance that conditions may not be equally severe, or even worse, next year or during some succeeding year. For that reason definite plans for meeting any possible emergency likely to result from a recurrence of this year's unusual weather should be prepared now in detail.

Elimination of wood shingle roofs, insofar as possible, is a most desirable move. Establishment of stricter bonfire regulations, planned clean-up campaigns, including the removal of tall grass, weeds and brush from around buildings, better housekeeping around lumber yards and a careful check-up of possible sources of water supply for fire fighting all deserve attention.

If the city or town is adjacent to large forest or brush areas, the construction of fire breaks to protect the municipality would be in order.

Completion in detail of plans for calling and utilizing help from neighboring communities should be consummated.

Well organized plans for meeting an emergency will save time and possibly a lot of property when the emergency occurs.

Fred. Sheppard

Collision Between a Street Car and Fire Apparatus at an Intersection

Should Fire Apparatus Obey Red Lights?

By WILLIAM H. GARDNER,
Chief, Underwriters' Fire Patrol,
Kansas City, Mo.

William H. Gardner

THE past two years have witnessed a pronounced growth of the use of automobiles. The traffic problem with its relation to the Fire Department is already acute and requires immediate measures of relief. It is only reasonable to believe that traffic difficulties will continue to grow in the years to come. If fire apparatus en route to a fire are forced to wait at four or five intersections while lights change, what started as a small fire will very likely be one of formidable proportions before the firemen start to work. This leads us to wonder what effect such a plan will have on fire losses.

I am sure Fire Chiefs will agree that a delayed fire alarm is a severe handicap to the department, and that the delayed response of apparatus is worse. Lives and property are at stake, at least potentially, every time an alarm is transmitted to the Fire Department, particularly if the call involves a factory, theatre, asylum, hospital, hotel or school building.

Fire Departments Granted Right-of-Way

Fire Departments in most cities are granted, either by city ordinance or state statute, the paramount right-of-way over and through all streets, avenues and alleys, when going to a fire. Returning from a fire the general rule is that all traffic regulations must be obeyed. Many Fire Chiefs entertain the opinion that apparatus should not stop for red traffic lights when answering a fire call due to the fact that city ordinances provide a legal right-of-way, and it does seem they are, in a measure, justified in maintaining such an opinion.

It appears that a few ambitious traffic light salesmen made a sweep of the country in 1928, 1929 and 1930 Installations became numerous in the larger cities, and perhaps we have far too many traffic lights in the United States. No doubt some have been discontinued because of their impeding effect on traffic, but the fact remains that traffic lights have been generally accepted throughout the entire nation, and for the future it appears quite evident that the red traffic stop light will be the means of imposing a definite strain on fire apparatus because of the weight, length of wheelbase and relative lack of acceleration in pumpers, hook and ladder trucks and other heavy fire apparatus.

Right of Way for Emergency Vehicles

Recently the National Conference on Street and Highway Safety adopted as part of the Uniform Vehicle Code the following:

"The driver of any authorized emergency vehicle when responding to an emergency call upon approaching a red or stop signal or any stop sign shall slow down as necessary for safety, but may proceed cautiously past such red or stop sign or signal. At other times drivers of authorized emergency vehicles shall stop in obedience to a stop sign or signal."

They designated as emergency vehicles fire apparatus, fire patrol and police vehicles, and others so designated by the local authorities. The National Safety Council urges the enactment of the above provision in every State and City.

Chief John M. Evans, New Orleans, La., recently posted a positive order commanding all fire apparatus under his jurisdiction to stop for red light signals en route to fires. His order followed a decision in the circuit court of appeals, holding that fire apparatus is bound, like any other vehicle, to stop for red lights.

Judges' Decisions on the Subject

Several months ago a Superior Court Judge of California decided that fire apparatus must obey the laws required of other vehicles. Apparatus responding to a 4-alarm fire in Oakland, Cal., traveled through a main street heavily congested on the right side but had a clear way on the left, the wrong side for traffic. While the apparatus was moving through the left side, a woman darted across the path of the apparatus. In trying to avoid striking the woman, the apparatus was struck on the left side by another automobile which swerved the apparatus so that its right fender struck her and knocked her down. She died on the way to the hospital.

The evidence showed that the apparatus had passed a street car on the wrong side of the street and had ignored a traffic light. The suit against the city was for $50,000. In awarding the $5,000 damages, the Judge stated:

"There is no exception under the law permitting the police or fire automobiles to violate the traffic laws."

A Judge of the Common Pleas Court, Cincinnati, Ohio, ruled January 20, 1933, "That fire apparatus must observe the rules of the road, as well as other motor signals." I have been informed that fire apparatus in Cleveland, Ohio, are obliged to obey the traffic ordinance, and that the response of apparatus is unnecessarily delayed by each company's having to send a man ahead before crossing a street intersection against a red light.

A new law concerning the passage of fire apparatus through signal lights in Massachusetts was approved June 30, 1934. This law requires all Fire Department, Police Department and fire patrol vehicles to come to a full stop at red lights, and then proceed with caution.

The Problem in Great Britain

From the British magazine *Fire* of July, 1934, I note that the Road Bill before Parliament states:

"The drivers of vehicles such as fire engines and ambulances are subject to the same obligation to obey light signals as the drivers of other vehicles,"

which shows that the question of fire apparatus and traffic is bothering them almost as much as it is us.

Opinions of Fifty Fire Chiefs

I was interested in reading the opinions of about fifty Fire Chiefs as they appeared in FIRE ENGINEERING, of July, 1933, on the question of fire apparatus obeying traffic stop lights. I found thirty-two Chiefs were of the opinion that Fire Departments should not be required to observe traffic rules while en route to fires. Six Chiefs agreed that fire apparatus should stop, at least momentarily, for the red light. Two others thought it advisable to slow down for red lights, and proceed through the intersection with extreme caution.

No Notification of Approach of Fire Apparatus

A variety of traffic light signals are now in use in most of our cities, but there seems to be no uniform method in use of giving an advanced emergency indication of the approach of fire apparatus, and in some cities, no attempt whatsoever is made to control traffic for such emergencies. Fire Departments are today confronted with the increasing congestion of traffic conditions which seriously handicaps their speed in answering the alarm of fire. Modern traffic cannot adjust itself immediately on the approach of fire apparatus—advance warning is necessary at important street intersections in the form of a signal to rise above the roar of street traffic announcing the approach, or possible approach, of fire apparatus. In Kansas City, Mo., street bells are used, but they are seemingly ineffective. The installation of electric sirens would be far more beneficial to the Fire Department and the general public.

This Apparatus Was Driven Through a Red Light and Collided with an Automobile Approaching at Right Angles. The Driver of the Fire Apparatus Was Killed

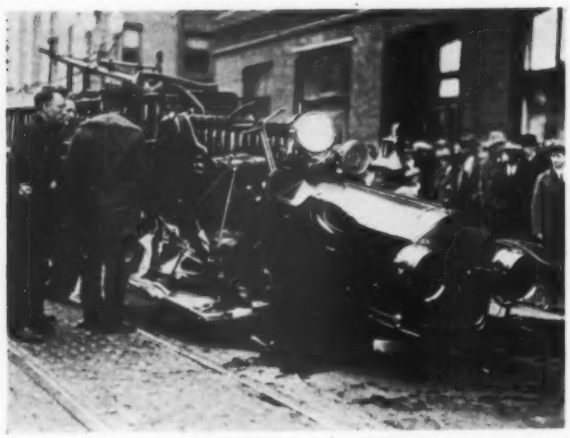
The Problem of Congested Intersections

The hourly changes in the amount and direction of traffic, the variation in speed of vehicles, angular or irregular intersections, trolley tracks, bus and trolley stops, turning at intersections and various items which enter into the problem, make it questionable whether automatic traffic control lights will ever be practicable. From an analysis by the Travelers Insurance Company, we learn that in 1932 240 pedestrians were killed and 11,690 injured while crossing street intersections with the traffic signals. One thousand were killed and 32,940 injured while crossing against traffic signals. Possibly individual police supervision should prevail in the larger cities at crowded and congested street intersections during busy hours of the day and night.

Building Up False Ideas of Security

It is my opinion that we are building up false ideas of security by depending entirely too much upon these automatic traffic lights. Frequently red lights are ignored by motorists and street car operators. This has happened recently in Kansas City, Mo. In one case a street car collided with a hook and ladder truck at a boulevard intersection. The fire truck was traveling with the green light. The truck was damaged badly and the front end of the street car was caved in and several windows shattered. Four firemen riding the truck were severely injured.

The other case involved a pumper company and a speeding motorist. The fire apparatus was passing through an intersection with the green light. The motorist "crashed" the red light, striking the pumper company, causing a heavy damage and injuring the fire captain and two others. This directs our attention to



Wreck of a Fire Apparatus Which Collided With a Street Car in Answering an Alarm. The Car Was Knocked From the Track and the Apparatus Wrecked, Injuring Several of the Firemen

the fact that fire apparatus is constantly in danger while en route to a fire, and that the drivers of apparatus should have their vehicles under control at all times, especially at street intersections. For a city to adopt a traffic ordinance requiring fire apparatus to come to a full stop on a red light, and then proceed is poor judgment, in my opinion, because drivers entering the intersection on the green light might form the opinion that the emergency vehicle was giving them the right-of-way and waiting for the light to change, which would cause them to proceed immediately into the path of the emergency equipment.

Electric Sirens to Announce Apparatus' Approach

There obviously is confusion as to what should be done to provide and put into operation a better and more suitable method of emergency traffic control covering the entire country. In the analysis it appears that most cities, by ordinance, grant the Fire Department the legal right-of-way over public streets while going to a fire. We also find the courts rendering judicial decisions that fire trucks must obey the red traffic lights and observe them the same as other vehicles. These court decisions have restricted the right-of-way authority of the Fire Department. Fire Departments have a legal right to respond to a fire alarm, but according to the courts no legal right is granted to "crash" a red traffic signal. Why not eliminate all lights in the fire lanes while fire trucks are enroute to a fire, substituting in lieu thereof, traffic signal electric sirens at the important intersections? This might relieve the municipalities of a large number of damage suits, and greatly reduce court criticism.

Fire Chief John C. Moran tells me the city of Hartford, Conn., has been operating traffic signal electric sirens for many years on the principal street corners. These sirens are operated usually before the fire companies leave the stations. All traffic stops or pulls to the curbing upon the sounding of the traffic signal siren. They are controlled by the fire alarm operators. Chief Moran sums up his successful experience with the Hartford system by saying, "We have never been held up by traffic while responding to alarms of fire since the system was installed."

In conclusion I would like to say that a test was made in a traffic jam that developed in the city of Hackensack, N. J., a few years ago by turning off all traffic lights. The traffic jam straightened itself out in a remarkably short time and it was admitted by the students of the traffic movement who know the circumstances, that the traffic lights were causing jams and accidents rather than preventing them. With this thought in mind, it would be safer to shut off traffic lights completely for a few minutes in case of fire or emergency, than to permit the drivers of emergency apparatus to crash red lights. In saving property we should not endanger or destroy human life.

Advantages of Sirens with Traffic Lights Out

By using traffic signal electric sirens for the proper advanced warning at intersections of the possible approach of fire apparatus, it is unlikely that motorists will refuse to yield the right-of-way to the Fire Department. If the traffic signal lights were out completely during the time the sirens were blowing, the average motorist would become less confused as to his right to stop or go, and by using careful and safe judgment, the possibilities are that the traffic lanes would be cleared rapidly by the individual motorists and left in a good safe condition for the successful passage of fire apparatus.

(Excerpts from a paper read before the annual convention of the International Association of Fire Chiefs at Milwaukee.)

Dominion Chiefs Meet at London, Ont.

London, Ont., was host to the Dominion Association of Fire Chiefs which convened there August 14-17 for its twenty-sixth annual convention.

Chief George Sinclair, Toronto, presented a paper on reducing fire hazards in apartment houses. He urged more careful planning and convenient placing of the gas shut-off. George E. Thomas, Toronto, demonstrated the use of various fire extinguishers on different types of fires.

The Windsor Rescue Squad under the direction of Chief C. F. Defield, gave a demonstration of rescusitation.

Mayor Wenige, Col. Walter J. Brown of the University of Western Ontario and J. J. McHale of the local Kiwanis Club were speakers at a banquet held at the Hotel London.

Three Lose Lives at Oil Barge Fire

Three members of the Toronto, Ont., Canada, Fire Department lost their lives, and nine others were severely burned, while fighting a fire in the oil barge En Ar Co which was moored at the east end of the Harbor at the foot of Carlaw Avenue.

Workmen on the barge noticed the fire and sent in a box alarm at 11:30 a.m. This alarm brought a Seagrave hose truck, two 1,000-gallon triple combination American-LaFrance pumpers, an 85-foot American-LaFrance aerial ladder and a city service truck with District Chief Dixon. They found a small fire and with the aid of a single 2½-inch hose line had the fire under control in a few minutes. Chief Dixon, Lieutenant Henry and Fireman Swires went on board to overhaul and then a terrific explosion occurred about 12:30 a.m., rocking nearby buildings. Bodies were hurled high into the air. These three men lost their lives.

A second alarm was sent and this brought three 1,000-gallon pumpers, two hose trucks, two 85-foot aerial ladders, a salvage car, gas oil truck, a fire tug, Assistant Chief Duncan McLean, and ambulances from various hospitals.

Upon arrival, Chief McLean ordered men from the barge. One man was placed on a tanker anchored close by with a hose line, high pressure streams were directed from the Fireboat Roulille, and foam was also used. At 1:25 p.m. a minor explosion took place in front of the tanker, blowing off the railing and bulging the sides. Chief McLean ordered his men to try to sink the barge and this was accomplished at 3:30 p.m. The Life Saving Crew then started searching for bodies. Chief George Sinclair was on vacation, and when notified of the disaster, left for the city at once.

Extra police had to be called to hold back the crowds of people surging toward the danger zone. J. K. Lee.

Evils of Over-Insurance

By W. H. G. KEGG,
Secretary, Lumberman's
Mutual Fire Insurance Co.,
Mansfield, Ohio

SINCE insurance is an integral part of the economics of our business and social structure, and since it does not belong essentially to any of the major divisions of economics, its mission must be distinctly that of risk bearing and risk elimination.

The business and social structure is subject to many hazards such as the risk of loss of tangible property through fires as well as other casualties; the risk of loss of profit resulting from the use of property; the loss of life through fire and other casualty.

All the vast amounts paid for indemnity and excess of taxes over cost of supervision has been returned to the economic life of our business structure, without which the appalling loss would have broken down our social structure long ago.

In the development of this great institution of insurance, Loss Prevention has claimed a large part. The best risk physically becomes a bad risk in the hands of an unscrupulous or careless owner.

Requires Ability to Detect Fraud

To detect danger growing out of the desire of a property owner to realize upon his property by burning or having it burned, that he may collect its value from the insurance which he carries requires ability upon the part of the representative of the company. The agent or representative of the insurance company must possess more than the average amount of intelligence and common sense. He must acquaint himself with values to guard against the imposition of fraud upon the insurance companies.

Percentage of Incendiary Fires Larger in Small Cities

The percentage of incendiary fires for purpose of gain is always increased during periods of business depression and it is a noticeable fact that fires of such origin occur with more frequency in the smaller cities where the chances of extinguishing them are less than in the larger cities having better fire fighting facilities.

Evil of Over-Insurance

The probabilities of extinction, in a city with an effective Fire Department, involve probabilities of discovery and the incendiary is often deterred from starting a fire by these considerations. Incendiarism or carelessness leading to fire or accident is almost sure to follow the purchase of insurance in larger amount than the actual value of the property. This is commonly referred to as *over-insurance.*

Agent Should Expose Fraud of Property Owner

For the purpose of gain the unscrupulous property owner purchases all the insurance he can induce an agent to write for him and then if he can conceal the fact will endeavor to secure additional amounts from other agents. Here the alert agent will be exposing the intent at fraud not only to save his company unnecessary loss, but to serve his community by preventing a criminal act and the loss of useful property.

All Cases of Overinsurance Not Fraudulent

Fortunately, not all the cases of "over-insurance" are fraudulent. Many are the result of fluctuating values without comparison with the amount of insurance carried. Loss under such circumstances is not difficult of settlement on a satisfactory basis. It is not improbable that companies lose more money in consequence of the indifference of owners to the safety of property which brings them no income and which is fully insured than by the designing incendiary.

Losses Follow Tendencies of Business

It is noticeable that the sum of insurance losses follows the tendencies and the fortunes of business; when business is progressively profitable losses are fewer and when unprofitable and going through depressions losses increase in volume. Value is, therefore, not the only thing to be taken into consideration. Buildings and other property may in full periods be replaced for much less than the original cost. This provides a chance for profit if the owner is able to recover his full insurance. Buildings are often found to be too small or too large or are otherwise unfitted for their original use and if not available for other purposes are practically valueless. A proper allowance should be made for such depreciated value and the insurance reduced or cancelled entirely. The honest owner will take these steps but the dishonest owner will surely cause the department an extra piece of work.

Overvaluation is the Rule

Over valuation is the rule, and not the exception. It is natural for an owner to over-estimate the value of his property. He seldom makes proper deduction for depreciation arising from age, wear, use, etc. Here the company representative or agent must use care and diligence in protecting the situation by discrimination and intelligence. Investigation should be made as to the character of the owner, his financial status and condition of business as well as the class of merchandise his desirability as a risk at the time of effecting insurance.

(Excerpts from a paper read before the annual convention of the Ohio Fire Chiefs' Association.)

Fire Alarm Men Meet in Stamford, Conn.

The fall meeting of the New England Municipal Signal Association was held in the Roger Smith Hotel, Stamford, Conn., on September 12 and 13.

E. A. Steward, of the New England Telephone and Telegraph Company, gave a talk on "The Use of the Teletype by the Fire and Police Departments."

F. A. Schubert, of the Mohawk Electric Manufacturing Company, of Newark, N. J., spoke on "Rectifiers, Single Stroke Bells and Relays Used in the Stamford Equipment."

There was a demonstration of the Teletector Protection System by the Electronic Equipment Company. This equipment is operated on advanced radio principles and is a radical departure from existing methods of burglar and fire protection.

A visit was made to the plant of the Air Reduction Corporation, where Dr. Balcar, engineer of the firm, explained the Neon Gas Arrester Manufacture and the production of other rare gases.

HARRY BELKNAP.

THE ROUND TABLE

For Practical Discussion of Current Fire Department and Fire Management Problems

SPRINKLERS IN PUBLIC SCHOOLS

SCHOOL protection is an important Fire Department responsibility. Within the school buildings are housed hundreds of children in progressive age groups, some unable to think for themselves, and some too impulsive to be depended upon in a crisis. They are confined in these buildings for about five hours each school day.

Devices which will protect such buildings from the spread of fire will also enable the occupants to reach safety should a blaze develop. Automatic sprinklers and smokeproof towers are not uncommon in industrial plants where property must be guarded, but they are not general in schools, because of thoughtless economies that are practiced by some supervising school boards.

The problem in full that is discussed in this issue appears in the box on this page. In the box on the following page is the question that will be treated in the next issue. Should you have some comments that you would like to add to the next discussion, you are invited to write to the "Round Table Editor," FIRE ENGINEERING, 24 West 40th Street, New York, N. Y.

Discussion of the Question

Anthony J. Mullaney, Deputy Chief Fire Marshal, Chicago, Ill.: Relative to a questionnaire regarding sprinkler installation, smokeproof towers and other safety measures for the safeguarding of lives of occupants of school buildings, I call attention to a report of a committee formed for the purpose of establishing regulations towards the safeguarding of the lives of school children, and other occupants of the public and parochial schools in this city (Excerpts of this report will be published in a later issue—EDITOR).

This committee was composed of representatives from the Chicago Fire Department, Building Department and Board of Education and it investigated over 400 school buildings of different types of construction, varying from the portable frame structures to those of the most modern design and construction.

This report gave due consideration to conditions and hazards existing in school buildings and much consideration and close study was given to the subject of sprinkler installation, and smokeproof towers in buildings of not strictly fireproof construction. These two subjects were discussed with the executives of this city regarding their installation and it was agreed the cost of installation and maintenance of a sprinkler system would be prohibitive due to the closing down of the heating systems in school buildings over the week-end. This would render sprinkler systems inactive, except where the dry system was used.

After several conferences it was agreed that smokeproof towers would be a very valuable assistance in safely exiting a building, but due to the wide stairways in most school buildings it might impede the progress of exiting and also confuse the children in reaching the smokeproof towers.

Part of the record lists many improved methods for the safeguarding and protection of pupils and persons occupying school buildings, viz: The standard and efficient practice of periodical fire drills, also a treatise on the general housekeeping conditions in school buildings.

Rufus A. Crittenden, Chief, Haverhill, Mass.: The installation of automatic sprinkler systems in all types of public school buildings is the greatest asset any city or town can have for safeguarding and reducing the hazard to the lives of its pupils and teachers. If industrial plants and business concerns that are equipped with automatic sprinklers consider it of vital importance that their buildings and stock be protected, is it not of much greater importance that the lives of the pupils and teachers in our public schools be safeguarded and the hazard reduced by the installation of automatic sprinklers? It also protects the school property, controls many small fires, which otherwise would gain much headway, and reduces the insurance rates on the buildings. If, in the interest of economy (so-called) the entire building is not to be equipped with automatic sprinklers, the basement and stairways should be considered first, as the heating plant and storage rooms for supplies and fuel are placed there. No doubt, cleaning supplies and material are stored in frame closets or under stairways which need this protection. A properly installed automatic sprinkler system would cover any of the danger points in the building and give the parents of the children a feeling of security which they cannot have in an unprotected school building. One sprinkler head in a sprinkler system building is worth a dozen extinguishers in an unprotected school building.

As smokeproof towers for schools that are not fireproof are required, it should also, in my opinion, mean that all laws and regulations in this regard be enforced and all schools, not so equipped, be equipped with smokeproof towers. Of what value to a community is a school, not fireproof, with the lives of pupils and teachers in constant danger at all times in the event of fire? Their lives are of first importance and should be safeguarded by all known modern fire protection possible to this type of building. If they are constructed according to the laws and specifications, they should, with proper fire drills and supervision, at least provide a protected egress from the school building in the event of fire. This would reduce the fear and panic which might arise from having no such protected egress from the building. As all adults fear smoke and fire, consider how much greater is the fear of children who might have to attempt to get through a smoke-filled school building not so protected. New construction in a non-fireproof school, such as the construction of smoke towers, will lessen the hazard to life which, in my opinion is the first thing to be considered in any type of building, be it school, hospital, institution, or any public building.

The steps that insure good school

HERE IS THE PROBLEM

What comments have you concerning the installation of sprinklers in public schools?

What is your opinion concerning required smokeproof towers for schools that are not fireproof?

What steps do you take to insure good school construction from the fire prevention viewpoint and the hazard to life during a fire?

construction are rigid enforcement of all state and building regulations that cover this type of building. It is also our duty to see that the architects, who draw up the plans, understand and have in the plans every modern means for the safeguarding of life and protection of the school property. This would include fireproof construction throughout the building, installation of automatic sprinkler system in the entire building, fireproof basement, boiler room, fuel storage, fire protection for all stairways, storage rooms, closets, self-closing or automatic fire doors, regulation of fire escapes and exit doors, modern fire alarm system throughout the building connected to local Fire Department alarm box, efficient fire drills, frequent inspections by Fire Department inspectors and instruction of pupils and teachers in fire-prevention work.

John Heinz, Chief, Pittsburgh, Pa.: To allow children to be assembled in a school building that is not equipped with an automatic sprinkler system, regardless of the construction of the building, is to invite a catastrophe. The sprinkler system should include the basement, auditorium, storage rooms, stair and hallways. As a means of detecting fire when connected to an alarm system, and retarding and extinguishing fire in its incipience, the automatic sprinkler is indispensable.

A non-fireproof school building represents a great life hazard. Anything that will tend to reduce this hazard is commendable. Smokeproof towers do just that.

We are governed by the Municipal Building Code which requires that school buildings be of fireproof construction, sprinklered basement, self-closing fire doors, alarm systems, width of halls and stairs defined, etc.

George A. Smith, Chief, Pottsville, Pa.: I have had very little experience with fires in buildings where sprinklers are installed. I am of the opinion that sprinkler systems are very beneficial. I speak and highly recommend the installation of sprinklers in all buildings. I think smokeproof towers are wonderful in any building.

We have regular fire drills throughout the schools and make regular inspections of the emergency lighting systems, inspections of fire hose and fire extinguishers throughout the building, and fire escapes. We instruct the teachers and people in and around the building how to operate fire fighting equipment.

Howard Travers, Chief, Baltimore, Md.: Installation of sprinkler system and standpipes are the most efficient fire protection equipment that can be installed and no building of this type should be without them.

All public schools that are not of fireproof construction should be provided with smokeproof towers under any and all circumstances.

Departments having charge of school construction generally refer specifications and plans for information and recommendations, and it is always a policy of the Fire Department to feature the life hazard and point out fire prevention conditions generally. Particular attention is paid to stairways, fire escapes, cellars and attics.

T. H. Shipman, Chief, New London, Conn.: I have great faith in sprinkler systems and believe every school or public building should be so equipped.

In our city I was invited to speak before a school board meeting to explain the sprinkler system and its advantages. Shortly after in their budget for the ensuing year some seventy thousand dollars was set up for this work, but the cost was so high, it was rejected by the Council. This same item appeared again last year but was again rejected by Council because of the high initial cost.

It seems possible that at least some showing could have been made if they could have received the money. Council intends to install a system in one or two of the schools each year, beginning with the ones mostly in need of this protection, and by following it through each year, to have all completely equipped.

I have no data or experience concerning the smokeproof towers for schools, so am not in a position to state their advantages or disadvantages.

I have never been called upon for my opinion on school construction in this city, although several have been built during my administration. However, I believe the plans are submitted to the State Commission and the New England Insurance Exchange for their approval.

The department makes regular inspections of all school buildings either by the Chief or Deputy at least three or four times during school term. During at least one of these inspections the fire alarm is sounded, the fire drill observed, and time taken to empty building. Inspection reports and recommendations are forwarded to the Superintendent of schools after each inspection.

Additional apparatus units respond to all school boxes.

John G. Ford, Chief Fire Dept., Trenton, N. J.: Sprinklers should not be in class rooms but might be of advantage in basements, furnace rooms, etc.

Smokeproof towers for non-fireproof schools in my opinion would certainly be an additional means of exit, providing the towers themselves are fire resisting and consequently remove some hazards in case of fire or panic.

Schools in this city are constructed under specific requirements and supervision; the City Building Inspector being much in evidence. All necessary fire hazard requirements are complied with, and fire fighting equipment properly placed.

John L. Lucier, Chief, Northampton, Mass.: All schools whether fireproof, semi-fireproof, or wooden construction should be sprinkled, at least in the basement and other hazardous places. I recommend this in our town practically every year. I consider sprinklers the very cheapest and best protection, regardless of cost, that we can give the children.

Smokeproof towers are good and give the children the chance that they would not get on open stairways. But be sure there are no locks on doors leading into the tower.

All of our schools constructed in the past few years are built under state and local building laws, under the supervision of city building inspector. No schools are over two stories and exits are on all four sides in most cases.

M. J. Fleming, Chief, Albany, N. Y.: Sprinklers installed in cellars of school buildings would meet all requirements of safety. In buildings where an auditorium is in use and where there is scenery and decorations stored sprinklers should be installed. No storage should be permitted in attics and if it is allowed there should be a sprinkler system in use.

A smokeproof tower in non-fireproof buildings is very commendable and I believe would help to reduce the life hazard in such buildings.

In Albany all school buildings erected must be of fireproof construction, with plenty of exits, doors swinging out and panic bolts on all exit doors and doors leading to fire escapes.

In our city, schools are inspected daily before classes are assembled. Doors leading to fire escapes and exit doors tried to see that they are in good working order. Boiler rooms and cellars are visited to see there is no accumulation of waste paper. No storage boxes are permitted in any school. Paper not exceeding 5 bales are allowed each school.

John H. Espey, Chief, Elmira, N. Y.: I think every school, public, parochial or private should be sprinklered especially the basements and boiler rooms.

Schools, I believe, should have smokeproof towers.

The Building Superintendent in our city is responsible for the construction material used in school buildings.

Chris Smith, Chief, Muskegon, Mich.: I believe that sprinklers would be very good in schools if they were put in the basement and fire room, and in closets where supplies were kept. I cannot see where they would be of any value in the class room.

For school buildings to be fire resistant in order to prevent loss of life, they should be of good fireproof material, have wide stairways and halls on each side of the building.

HERE IS THE PROBLEM FOR THE NEXT ISSUE

What pay, if any, do your volunteer firemen receive? Call men? Special fire-fighters drafted at the fire?

How are these men paid when responding to calls outside the city limits?

In view of the pay granted, does the village attempt to control who shall join the Fire Department?

Joseph Shirk, Chief, Gary, Ind.: I consider sprinkler systems in schools a necessity, more so in the vacation time when the school is closed, for the protection of the property itself.

To insure good school construction they should be absolutely fireproof, according to the laws of the state and city, and equipped with sprinklers and fireproof towers.

We have constant fire inspection in all schools, to eliminate all fire hazards. This is done four times a year. We see that they have the required number and proper exits constructed according to the State rules for the safety of the student body. We also have the school teachers cooperate by having fire drills once a month and a Fire Prevention Week observance once a year with special talks, entertainments, etc., for the purpose of educating the children or students on fire prevention.

H. C. Root, Chief, Springfield, Mass.: I believe that sprinklers should be in all public school basements and corridors at least.

Smokeproof towers are perfectly all right, but if second and third class school buildings were sprinklered throughout with proper supervision and buildings equipped with outside fire escapes, smoke towers would be needless. We have nothing to do with school construction as that comes under state law and local ordinance.

Robert J. Fahm, Acting Commissioner, Buffalo, N. Y.: I would highly recommend the installation of sprinkler systems in basements and storage rooms of public schools, with an automatic fire alarm attached thereto. In my opinion, smokeproof towers are very essential in all schools which are not fireproof.

School building construction in Buffalo is covered by very efficient local building laws—also schools are inspected weekly by an officer of the Fire Department.

Fire alarm stations are located at all public schools and fire drills are held monthly by an officer of the Fire Department.

J. J. Kuplic, Chief, Manitowoc, Wis.: I do not believe sprinklers are needed in fireproof schools. We have smokeproof towers and find them to be very good.

All new schools in our city are of fireproof construction in accordance with state laws.

* * *

ANSWERS TO PREVIOUS QUESTIONS

The following replies were received in answer to a previous question on maintaining fire service during cold weather:

Carroll Nash, Chief, Dover, N. H.: We have two combination wagons equipped with chemical tanks. During cold weather we keep the valves covered up with a blanket and also drain the hose by blowing the water out with a bicycle pump. On the Ahrens-Fox pumpers we cover the front with a heavy blanket if we are going on a long run.

We have nothing to do with the hydrants. That is wholly up to the Water Department. They put alcohol in the so-called wet hydrants.

The only suggestion that I would make on this question would be to take all precautions possible to prevent interrupted fire service during cold weather.

We were very fortunate last winter. We were pretty busy but only came across one hydrant that was frozen. Hydrants were well taken care of by the Water Department. If we opened a hydrant in cold weather we always notified the Superintendent of the Water Department. No matter whether it was day or night, they went out and serviced it.

John Lehm, Chief, Madison, Wis.: During cold weather our apparatus have anti-freeze in the radiators and the motors are kept running while the units are out to calls. We also have our chemical tanks covered and pipes wrapped to keep them from freezing. We also make sure that pumps are properly drained and kept in good condition.

We have hydrant inspection. When a hydrant is used, it is reported and a man is sent at once to see that it has drained properly and in a safe condition.

Eugene T. Ricker, Chief, Biddeford, Me.: The Fire Department in this city did not experience any interrupted service during the past winter. The water company had a few frozen hydrants, but being a privately owned concern, it attended to this trouble. We did not have to use any hydrants that were frozen.

To insure operation of motor equipment during cold weather we use a non-freezing liquid in the radiators. We use nothing on the larger trucks as we keep the motors running all the time, and the engines being of the heavy duty type generating a lot of heat, we have never had any trouble. When a stream of water is shut-off at the nozzle, we leave the shut-off partly open to avoid freezing.

Our water system is owned and operated by a private concern. It employs men during cold weather to make daily inspections of the hydrants and to see that there will be no interrupted service due to cold weather.

My suggestions to safeguard uninterrupted service during severe winters would be daily inspection of all hydrants; cooperation with the Highway Department to keep the hydrants free from snow, especially when the road plows push the snow against the hydrants; seeing that all valves on pumping engines are examined and freed from freezing.

Edward F. Dahill, Chief, New Bedford, Mass.: During the winter season all gasoline motors are started and apparatus inspected every morning at 8 a.m. Officers are also required to see that motors and pumps are turned over frequently when exposed to freezing temperature. Non-freezing solutions are used in radiators.

Hydrants are under the supervision and care of the Water Department.

To avoid trouble during the winter months, it is good practice to check daily on the condition of apparatus and equipment and also never to allow pumpers to stand idle in freezing temperatures.

H. J. Leech, Chief, Yeadon, Pa.: Our equipment is in a heated building during the winter, and all exposed parts of pumps and chemicals are wrapped up to prevent freezing. The water company services the hydrants.

We have ashes placed on all highway grades, deep snow is broken up, and snow is cleared from the hydrant zone.

George Atchison, Chief, Miles City, Mont.: The temperature in this part of the country sometimes gets to forty and fifty below zero. We have a special cover made for the pump to keep gauges and small radiator water lines from freezing. We also carry small garden hose in case radiator lines freeze.

All fire hydrants are inspected, and also pumped and drained.

We have hoods for all trucks used. We use no solution of any kind. We keep chains on all trucks in the winter in case of deep snow.

The only trouble that I have ever had is the breaking of cross chains. This trouble has, however, been eliminated in recent years.

Charles P. Loller, Chief, Hamden, Conn.: We see that the pump is kept drained and that alcohol is placed in ladder and squad wagons during cold weather.

We send the paid men around to check up on important hydrants to ascertain whether or not they have been affected by the cold weather.

It is wise to keep the pump going and keep water running through hose until you are ready to break it up during weather of low temperature. We have had snow troubles this past winter.

John H. Espey, Chief, Elmira, N. Y.: The maintenance of hydrants the year round is under the direction of the Water Board. Inspectors make systematic tours and we have had little difficulty even in severe weatner with frozen hydrants.

Henry E. Whitney, Jr., Chief Brattleboro, Vt.: During the winter alcohol is used in the radiators and the equipment is kept in heated quarters.

Hydrants in our city are inspected and cared for by the Water Department.

E. I. Kingsley, Chief, Aberdeen, S. D.: Constant vigilance is necessary to insure the operation of equipment during cold weather. The Water Department attends to hydrant service.

Dr. F. Waisinske, Chief, Marshfield, Wis.: During the winter months a thinner oil is used in apparatus, equipment is kept in a warm place, and alcohol is used in the radiator. Inspection crews check hydrants during the cold weather and also pump the water out of them. Last winter we found slippery streets quite troublesome when answering an alarm.

John A. Fisher, Chief, Duluth, Minn.: During the cold weather we wrap connections to insure their operation. After a hydrant is used in the winter the Water Department drains it.

It is a good practice to keep lines running during severe winters. Our water mains are seven feet in the ground below the frost line.

W. F. Woods, Chief, Portsmouth, N. H.: We wrap all exposed parts of booster and chemical tanks with paper and woolen cloths. An inspection crew checks up on the hydrants during the cold weather months.

Henry Esler, Chief, Kaukauna, Wis.: In the fall of the year all of our hydrants are inspected. We follow this practice every ten days during the winter, to determine whether or not the hydrants are in proper working condition. Our trucks are looked after every day, and the engines operated daily.

In the thirty years that I have been on the force and in command, we have never had any kind of trouble in the winter.

With regard to the hydrants and their inspection, the city has two men who take care of all hydrants. They inspect them every ten days in the winter. When there is a fire these men are on the job to see that the hydrants are drained properly.

At a fire during the winter when we have three streams of water, during the course of the fire we only use one. The other two streams are allowed to run so that the water therein will not freeze.

During the winter my men always see that the hydrants are drained well, so they do not freeze. Also the hydrants on the dead ends have bleeders, which are running all during the winter, so as to insure safety at all times.

John F. Cutter, Chief, Newburyport, Mass.: A check up is made on all equipment, including batteries, each Monday morning during the winter.

The Water Department Superintendent has charge of checking hydrants.

To safeguard the efficiency of the Fire Department during the winter, it is necessary that all members attend strictly to their duty and cooperate closely with other city departments such as the Street Department.

W. A. Foster, Chief, Boise, Idaho: We have heaters connected to the motors to insure quick starting during the cold weather.

We employ inspection crews to observe if the important hydrants are in good condition. However, we have very little trouble as our winters are very mild.

The following replies are in answer to a previous question on suggested arrangements for reducing the number of arson fires, and the cooperation of police in running down arsonists:

John H. Monroe, Chief, Savannah, Ga., 83,075: To aid in reducing the number of arson cases, I would suggest, that all local agents participate in the payment of fire losses, the same as they participate in insurance premiums. This will cause them to be more careful in selling risky insurance.

Stock, other than that damaged by fire, is frequently sold on the original premises which was damaged by fire. In many cases goods are transported from other parts of the city and state and sold under the caption of fire sale.

We cooperate with the police in every manner possible to run down the arsonist.

Alex Calhoun, Chief, Chester, Pa., 58,000: When investigating a suspicious fire over-insurance is of first importance.

Insurance companies are too easy when a man is a big customer. For instance about eight months ago we had a fire back of a row of stores one story high. About half a block away was a furniture store which claimed a $1,400 smoke loss. They plastered the windows with circulars. I tried to stop the sale and also went to the local agent and he told me they carried very large insurance and he would lose their business were he to interfere.

All our cases are turned over to the detective bureau.

R. D. Gambrell, Chief, Dallas, Tex., 285,000: A rigid investigation of all fires, regardless of size or cause and a vigorous prosecution of all incendiary fires would aid in reducing the number of arson fires. I further believe that the close cooperation of the District Attorney's office is of material help.

Our department maintains its own arson investigation division, which is under the Fire Marshal. These men have police power. The fire marshal is directly under the Chief of the Fire Department. Our Police Department is always anxious to assist us in any way possible

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An appropriation of $42,846 has been asked by Mayor Richard M. Russell, Cambridge, Mass., for the purchase of fire apparatus.

Casey, Chief of Walla Walla, Retires

Thomas Casey, Chief of Fire Department, Walla Walla, Wash., since April 1, 1925, retired on September 22 due to physical disability. He is fifty-three year old and joined the department on July 1, 1905. The City Commission has not selected his successor.

Chief Murphy of Kingston Honored

Four hundred residents of Kingston, N. Y., attended a banquet at the Governor Clinton Hotel to honor Chief Joseph L. Murphy, who was elected President of the New York State Fire Chiefs' Association at a convention held at Jamestown. The local people presented him with a wrist watch and members of the Osborne Hose Company of Catskill gave him a large clock.

Chief Murphy has been a member of the Kingston Fire Department for twenty-six years, and Chief for ten years.

Frock Chief of Springfield, Ohio

Grover Frock, a member of the Springfield, Ohio, Fire Department for twenty-six years, has been appointed Chief to fill the vacancy caused by the resignation of Chief Louis Locher. Chief Locher had been ill some time and he only returned to duty recently. He resigned on October 1.

Chief Frock was appointed a member of the department on August 17, 1908; advanced to Captain in 1917; promoted to Assistant Chief, August 16, 1928. The Assistant Chief is Edward Garrity, Fire Marshal, and a member of the department for twenty-four years.

LARRY DONOVAN

N. J. Firemen Re-Elect Hasselhuhn

Chris H. Hasselhuhn was re-elected President of the New Jersey State Firemen's Association at the annual convention held at Atlantic City, September 21-22. The other officers are Charles W. Greenfield, Kearney, Vice-President; Charles E. Burr, Bordentown, re-elected Treasurer; Evan F. Benners, Moorestown, re-elected Secretary.

A resolution was passed seeking one representative of volunteer and exempt firemen on all federal county reemployment bureaus. The convention claimed that unemployed firemen do not receive proper consideration.

Former Chief Swingley, St. Louis, Dead

Charles Ernest Swingley, former Chief, first Director of Public Safety and for almost half a century a member of the St. Louis, Mo., Fire Department, died at the Berger Hotel, in that city on October 1 of pneumonia and the infirmities of age. He was 85 years old.

Chief Swingley became a member of the Fire Department when he was twenty years old and was appointed Chief on May 7, 1895. He remained Chief until 1914, when he was named Director of Public Safety.

Surviving are three sons. The funeral services were held in St. Louis at 2 p.m., on October 3. Burial was in Bellefontaine Cemetery, St. Louis.

Wisconsin Firemen Meet at Rhinelander

Wisconsin Chiefs went on record as protesting the sale of fireworks in the state, at the sixth annual convention of the Wisconsin State Fire Chiefs Association held at Rhinelander, September 25-27. During the meeting, the following papers were presented:

"How Building Construction has Aided Fire Departments," by Clarence R. James, Secretary, Wisconsin State Fire Prevention Association, Milwaukee.

"Progress in the Development of Fire Apparatus and Problems in Connection with its Use," by Clarence Goldsmith, Assistant Chief Engineers, National Board of Fire Underwriters, Chicago.

"Leadership in the Fire Service," by Richard E. Vernor, Manager, Fire Prevention Department, Wisconsin Actuarial Bureau, Chicago.

"Hazards of Modern Firemanship," by Dr. E. G. Meiter, Director, Industrial Hygiene, Employees Mutual Liability Insurance Company, Milwaukee.

"Proposed Legislation," by Joseph E. Kennedy, former State Fire Marshal, Madison, Wis.

"Common Fire Hazards," by J. E. Florin, Superintendent, Fire Prevention Bureau, Industrial Commission, Madison.

The officers are Arthur J. Rahn, Two Rivers, President; Chester S. Miller, Chenequa, Vice-President; A. C. Miller, Wisconsin Rapids, Secretary; J. J. Kuplic, Manitowoc, Treasurer; George McGillan, Appleton, Trustee for three years.

The next convention will be held at Hudson, probably the third week of August.

Questions and Answers

NOTE—Readers are invited to send in questions, which will be answered in the order received. Names are omitted from questions unless otherwise specified

Handling Tar Fire

To the Editor:

What is the proper method of fighting a burning tank of tar? The tank is seven feet long, four feet wide and about three feet deep. We have had some experience with firefoam, but found that the more fluid applied the more the tar boiled and blazed. We were finally forced to open the drain at the bottom of the tank and let the tar run out on the ground, which was more or less dangerous, as there were several large frame structures close by. A. B.

Answer: Foam of proper consistency properly applied to burning tar will always be effective. On the other hand if the foam is too wet it will cause boiling or if in applying the foam it is introduced into the burning tank with great force causing it to submerge unduly, then it would have a tendency to cause boiling. The best way of combating such fires is to blow the foam onto the surface, and if this is not possible, to flake the foam from the hose line by elevating it and allowing the foam to drop as gently as posible onto the surface. Just as soon as the fire is extinguished no more foam should be added as this only increases the possibility of moisture getting into the tar and causing it to flow over its container.

Extinguishers for Homes

To the Editor:

I would like information regarding a dry fire extinguisher to be used in homes, stores, small factories and other small buildings where fire protection is needed but at a minimum cost. M. A. J.

Answer: There is only one dry type of fire extinguisher on the market which is approved by the Underwriters' Laboratories. The ingredients of this extinguisher consist of a charge of powdered soda treated with a chemical to make the powder waterproof; also an inert gas used as a propelling agent for blowing the powder in the form of a cloud around burning material. This arrangement is quite effective, and is considered by the Underwriters' Laboratories to be as efficient as a larger unit of the soda and acid type.

From time to time dry powder extinguishers have appeared on the market, but they have invariably consisted of a container of soda mixed with some inert material to prevent the soda from caking. Such extinguishers for use in ordinary household fires are practically worthless.

It is the writer's opinion that a small carbon tetrachloride extinguisher is about as useful an extinguisher as can be found for general household work.

It is presumed you are familiar with the soda and acid extinguisher, which is the most commonly used. In this type of extinguisher the mixing of the soda solution and the acid develop a gas which is used as a propelling agent for forcing the liquid out of the extinguisher. Neither the soda nor the acid has any appreciable effect in extinguishing fire; the chief effect is secured by quenching with the water-soda solution.

Aluminum Dust Fires

To the Editor:

What would be the best method of extinguishing a fire in aluminum chips or borings containing about half of one per cent magnesium? I have been told that sand has been used effectively to extinguish such a fire, but due to the fact that our department has no sand wagon. I believe foam would be effective in putting out such a fire. R. S.

Answer: It is likely that foam would not be very satisfactory for extinguishing such a fire. As foam contains over 80% of water (by weight) and as moisture of any form is dangerous for use upon burning aluminum, the application of foam may cause a reaction which will break up the foam blanket as fast as it is formed. It may be stated that moisture is most dangerous in any form, if the aluminum dust be at all heated.

We do not believe sand would be effective unless applied in a very heavy layer and, must of necessity, be absolutely dry. A more effective means would be the use of sodium bicarbonate, such as used in charging soda and acid extinguishers. This material has been successful in extinguishing aluminum dust fires. But a large amount of heat is needed to decompose the sodium bicarbonate and release carbon dioxide gas, which acts as an extinguishing agent.

One method which has been tried with very good results in handling aluminum fires is to throw heavy oil over the fire (such as automobile engine oil) and let it burn until it forms a crust over the burning aluminum. Then apply carbon tetrachloride to extinguish the remaining fire.

"Frozen" Couplings, Etc.

To the Editor:

How can I prevent couplings from freezing up because of the rubber gasket, not only sticking so that the swivel will not work, but also sticking to the male end? We make up our couplings only hand tight, but after a month or two they are frozen together.

What kind of paint is the best to use to letter rubber coats and boots?

Answer: Rubber gaskets should be thoroughly lubricated with a fine dry graphite before placing gaskets in the coupling. We feel sure in that way they will prevent the gaskets from sticking to the metal.

Regarding paint for marking coats and boots would suggest the use of a lacquer paint, as the use of an oil paint frequently results in damage to the rubber clothing.

A more satisfactory way of marking coats and boots is to use embroidered letters (about 3 inches high) which can be vulcanized across the back of the coat or side of the boots, becoming part of the coat or boot itself.

The only objection to the latter method is that it must be done at the factory at the time of manufacture and it being a special process, results in delay of approximately four to five weeks in delivery.

Naturally, when painting letters on the garments, it is necessary to have stencils made—paper stencils are satisfactory and are not expensive.

Inflammable Volatiles

To the Editor:

In what kind of businesses are hydrocyanic acid gas and ethylene gas used? Are they combustible, explosive or poisonous? Would like the same information on carbon disulphide. J. J. H.

Answer: Hydrocyanic acid gas is a very poisonous, colorless liquid, boiling at 80° F., but remaining in a gaseous form at temperatures much below that. Vapor is lighter than air. It burns in air.

It is used as an insecticide and for fumigating purposes.

Apart from the poisonous qualities of hydrocyanic acid

gas, it is hazardous because its vapor is explosive if mixed with air, the maximum explosive mixture being one part of gas to five of air.

Ethylene is a colorless gas, which is slightly soluble in water, alcohol and ether. It is produced by strongly heating a mixture of alcohol and sulphuric or phosphoric acid.

It is used in organic preparations, and also in the production of mustard gas; it finds some use in oxy-ethylene welding and cutting of metals. It is highly inflammable, and hence dangerous around any source of ignition.

Carbon disulphide is a clear, colorless, volatile and inflammable liquid. It ignites spontaneously at 212° F. Its vapor is poisonous.

It is used as a solvent for extraction of oils and fats, and to some extent as a cleaner for removal of grease. It is employed to a small extent in rubber mills, also in manufacturing varnishes.

Its vapor is sometimes used to kill insects in grain elevators and mills.

It is the most hazardous of flammable volatiles on account of its ready evaporation and wide range of explosibility in mixture with air. Its vapors are heavier than air. The flash point is —22° F. and it inflames spontaneously at about 212° F. making contact with steam pipes dangerous.

Kentucky Firemen Continue Officers

All officers of the Kentucky Firemen's Association were re-elected at the fifteenth annual convention held at Newport, August 28-30. They are Russell Dyche, London, President; Frank Northcutt, Covington, Vice-President; W. S. Lipscomb, Lexington, Secretary; K. B. Phillips, Harrodsburg, Treasurer, and Burris Hensley, Ashland, Historian. Georgetown was selected for the 1935 convention.

Two of the features were the firemen's ball at which 1,500 persons attended, and the annual parade. During the meeting, the cornerstone was placed for a $50,000 fire station in Newport.

Delaware Firemen Hold Convention

A recommendation that legislation be passed to regulate the manufacture and sale of fireworks in the state, was made at the convention of the Delaware State Firemen's Association held at Harrington, September 19-20.

Chief William J. Lutz, Wilmington, spoke on fire protection and called attention to the need of eliminating hazards in cities and towns. Dues of the association were increased from ten to fifteen dollars a year. There were 150 delegates present from forty fire companies.

The officers are Walter Hubert, Marshallton, President; Thomas Baker, Dover, Vice-President; Samuel Carson, Dover, Secretary; John T. Guyer, Richardson Park, Treasurer; Thomas Kellam, Claymont, member of Executive Committee for three years.

The convention closed with a parade in which many fire companies participated.

Grimes Heads California Firemen

Willard Grimes, Oakland, was elected President of the California State Firemen's Association at the twelfth annual convention held at Santa Cruz, September 17-20. The other officers are Cecil M. Lochard, Alhambra, First Vice-President; H. M. Heiser, Sacramento, Second Vice-President; K. P. Holmes, Fresno, Third Vice-President; H. E. Strasser, San Diego, Secretary-Treasurer.

Committees were appointed to assist communities in establishing civil service commissions, and arranging pension schedules.

The visitors were taken on an automobile tour of the State Redwood Park at Big Basin. The day ended with a barbecue in the county grove at Felton.

Five Firemen Injured in Crash

Five members of the Cincinnati, Ohio, Fire Department were removed to a hospital because some resident had to have his joke and send in a false alarm. A new pumper which cost the city $12,500 was making its third run when it crashed into a street car. The right front wheel of the pumper was knocked off, the other front wheel was bent and other damage was done. The street car was derailed. Chief Houston has posted a reward of five hundred dollars for information leading to the arrest of the guilty person.

Police, acting on a slender clew, captured four boys who are said to be implicated in the sending of this alarm. They range in ages from sixteen to seventeen. The boys are being held by Juvenile Court authorities.

Fire Losses for August Lower

Fire losses for August, 1934, for the United States are 20.46 per cent below those of August, 1933, according to figures of the National Board of Fire Underwriters. The losses for August are $19,613,146. It is slightly higher than the losses for the previous month. The following table gives a summary of the losses for the past eight months, and a comparison with figures of previous years.

	1932	1933	1934
January	$39,224,783	$35,547,565	$28,002,583
February	39,824,622	36,661,481	31,443,484
March	49,189,124	35,321,248	31,312,359
April	43,822,233	27,825,970	22,028,943
May	39,270,524	24,338,714	25,271,459
June	34,338,670	21,578,609	20,005,692
July	32,982,434	20,004,049	19,484,027
August	31,425,931	23,626,505	19,613,146
Total 8 months	$310,078,321	$224,904,141	$197,161,693

Among Those Present at the Milwaukee Convention of the IAFC

Front Row—left to right—Chief John J. Brennan, Pelham Manor, N. Y.; Chief Carl Stockwell, Burlington, Vt.; Chief W. H. Hill, Belmont, Mass.; Chief R. A. Magee, Truro, Mass.; Chief R. E. Mottesheard, Dearborn, Mich.; Chief R. A. Bogan, Baton Rouge, La.; Salvage Supt. J. T. O'Donnell, St. Louis.

Rear—Chief Al Herring, Murphysboro, Ill.; Asst. Chief D. Corcoran, Milwaukee; Fire Patrols Supt. W. H. Gardner, Kansas City, Mo.; George Morley, Gamewell Co., Newton, Mass. (The photographer, unfortunately, missed the names of the other five gentlemen.)

FIRE APPARATUS INDUSTRY MEETS TO DISCUSS PRACTICES

Representatives of Manufacturers' Association Convene in Chicago—Trade Practice Provision of Code Considered by Members

A WELL attended meeting of the Motor Fire Apparatus Manufacturing Industry and the Motor Fire Apparatus Manufacturers' Association was held at Chicago, September 12 to consider operation of the NRA codes and practices as affecting the industry.

The meeting was opened by W. J. Parker, Secretary-Treasurer of the Association, and the introductory remarks were made by Charles H. Fox, President.

A. F. Cook, Assistant State Director, NRA Compliance, stressed the importance of the association, explained the NRA briefly, and discussed future possibilities. The question of common labor wages was brought up.

A talk on, "Benefits of Industry Cooperation," was made by J. H. Vander Vries, Chamber of Commerce of the United States. He told of the Wagner and other bills where a united front proved effective with Congress. He, too, stressed the importance of the association.

A discussion on "Labor Provisions of the Code" was led by O. M. Canter, American-LaFrance & Foamite Industries.

Percy Bugbee, Assistant Managing Director, National Fire Protection Association, was the speaker at the luncheon meeting. He recommended a replacement schedule of one unit of fire apparatus in each fifteen each year.

The afternoon session was devoted to a discussion on trade practice provisions of the code. There was a discussion on "Demonstrations" led by Ben Howe, Howe Fire Apparatus Company; "Standard Equipment Specifications and Uniform Warranty," by E. J. Wendell, Hale Fire Pump Company, Inc.; "Prices and Terms," by Dave Fenner, Mack-International Motor Truck Corporation; "Price Filing," by E. L. Maxim, Maxim Motor Company; "Trade-In Allowances," by H. M. Middleton, General Fire Truck Corporation; "Scope of Code," by Peter Pirsch, Peter Pirsch & Sons; "Excise Tax Situation," by F. A. Leicher, Luverne Fire Apparatus Company; "Code Enforcement," by H. B. Hall, NRA Administration Member of the Code Authority for the Motor Fire Apparatus Code.

It is probable that the next meeting will be held some time in December at Cleveland, Ohio.

The following were present at the meeting:

Ahrens-Fox Fire Engine Co., Cincinnati, Ohio, C. H. Fox
American-LaFrance & Foamite Industries, New York City, C. B. Rose, A. G. Sullivan and O. M. Canter
Boyer Fire Apparatus Co., Logansport, Ind., S. O. Cook
Buffalo Fire Appliance Corp., Buffalo, N. Y., G. R. Stephens
General Fire Truck Corp., St. Louis, Mo., H. M. Middleton
Hale Fire Pump Co., Inc., Conshohocken, Pa., E. J. Wendell
Howe Fire Apparatus Co., Anderson, Ind., Ben Howe
Mack-International Motor Truck Corp., New York City, D. C. Fenner and Al. Webb
Maxim Motor Co., Middleboro, Mass., E. L. Maxim
Peter Pirsch & Sons, Kenosha, Wis., Peter Pirsch
Seagrave Corp., Columbus, Ohio, H. B. Spain and Lester Stevenson
Stutz Fire Apparatus Co., Inc., Hartford City, Ind., A. C. Mechlenburg
U. S. Fire Apparatus Co., Inc., Wilmington, Del., C. P. Punte
Cayasler Manufacturing Co., Buffalo, N. Y., R. A. Case
Luverne Fire Apparatus Co., Luverne, Minn., F. A. Leicher
Northern Pump Co., Minneapolis, Minn., J. B. Hawley, Jr.
Waterous Co., St. Paul, Minn., Fred Waterous
Code Authority of the Motor Fire Apparatus Manufacturing Industry, New York City, W. J. Parker and A. O. Boniface
NRA Administrator Member, New York City, H. B. Hall

Activated Carbon Causes $100,000 Loss

Four pressure lines were used for four hours in fighting a blaze involving a large quantity of activated carbon in the experimental mill of the Mead Corporation, Chillicothe, Ohio, where experiments were being conducted to reclaim carbon from a pulp residue. At the time of the fire, there were 800 sacks of activated carbon in the plant. The intense heat of the blaze twisted steel girders and cracked brick walls. Damage was estimated at nearly $100,000 and the cause listed as spontaneous combustion.

Jerseyville, Ill., has appropriated $4,000 towards the purchase of fire apparatus to replace a unit in service sixteen years.

Convention Echoes

Thomas J. Dougherty, former Assistant Chief of the New York Fire Department, was made honorary member of the Association by unanimous vote. Chief Dougherty has contributed generously of his time during the past few years in addressing fire organizations, particularly in the Eastern section of the country, and is looked upon as the dean of fire department instructors in the country. He served as head of the New York Fire College for years and credit is due him for the tremendous advance made in practice of ventilating at fires. His paper on "Fire Fighting Methods" at the Milwaukee Convention was one of the high spots on the program.

The Great Lakes Association has been increasing very rapidly in strength and now ranks as one of the leading Districts of the International. The secret of a large measure of this success was discovered by those who attended the Milwaukee meeting. Chief R. E. Mottesheard, Secretary of the Great Lakes Association, and his very efficient and likeable assistant, Mrs. Mottesheard, parked themselves at the registration desk and didn't let any of the delegates from the Great Lakes District get by without bringing their dues up to date. This businesslike team (Mr. & Mrs.) are a bulwark of strength to the Great Lakes Association.

One of the interesting features of the Convention was the inspection trip to the Joseph Schlitz Brewing Company. Samples of the products of the plant were distributed generously to those who made the trip. Chief Ed Wynn, and some of the officers of the Association, including Pete Steinkellner, host to the Convention, had a privately conducted tour to the plant. As shown by the picture herewith, they seem to have had a pleasant time.

At the Convention of the International Association of Fire Chiefs at Milwaukee, a big banquet was staged in honor of Chief Allen by the New England Fire Chiefs present. A large number of Chiefs from other sections of the country, who are admirers of Chief Allen, were also on hand. Over 200 were present, all told.

Chief John W. O'Hearn, Secretary-Treasurer of the New England Association of Fire Chiefs, had charge of the arrangements and Chief Dan Tierney of Arlington, Mass., retiring President of the New England Association of Fire Chiefs, was toastmaster.

At the banquet Mrs. Allen was presented with a "persuader" in the form of a sturdy rolling pin, which she was recommended to use with discretion on Chief Allen.

Dr. Harry Archer Honored by Surgeons

Dr. Harry M. Archer, Honorary Medical Officer, New York Fire Department, was elected President of the International Association of Police and Fire Surgeons and Medical Directors of Civil Service Commissions, at the convention held in Philadelphia. This marks the third time that Dr. Archer has been elected to the presidency.

The other officers are Dr. George L. Wright, Syracuse, Vice-President; Dr. John J. White, New York Fire Department, Treasurer; Dr. Arthur Wildman, New York Municipal Civil Service Commission, Secretary. The 1935 convention will be held in New York City.

SOME DATA RELATIVE TO THE CONDUCTIVITY OF FIRE STREAMS

Resistances of Varying Stream Lengths and Pressures, Directed Onto Lines of Different Voltages

As requests for information as to the conductivity of fire streams have been received from time to time, the following extracts from the book, "What Every Fire Fighter Should Know," compiled a few years back by the Editor of FIRE ENGINEERING, *are reproduced to answer such queries:*

QUITE thorough and enlightening figures on the conducting qualities of fire streams is presented in data of experiments by Messrs. Allan Bond and O. G. Galland at the Ohio State University.

In order to determine definitely what hazards, if any, exist for firemen when they are compelled, in line of duty, to play water from fire streams on live wires at various potentials, arrangements were made so that circuits of 525, 2,300 and 4,600 volts, respectively, were available. One side of each of these circuits was thoroughly grounded and the fire stream was played on the other side, which was suspended in the air and thoroughly insulated. A suitable voltmeter was connected between the nozzle and ground to enable the difference of potential between the nozzle and ground to be noted in each case.

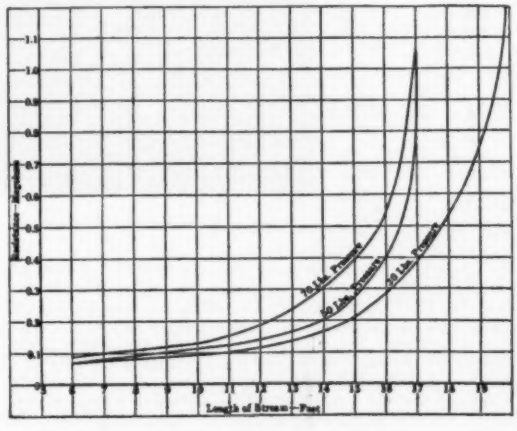


Fig. 1—Curves of Resistance
With varying stream lengths from a one and one-eighth inch nozzle, directed onto a 5,000 volt line

The results given in Table I were obtained in tests made the day previous to the general demonstration. These results show that the nozzle may be handled without discomfort up to a point between three and four feet from the wire when those handling the nozzle are standing on the ground. It may be carried much nearer without harm, but would probably cause discomfort. If those holding the nozzle were standing on a wooden ladder or otherwise insulated from the ground, it would be quite safe to bring the nozzle to within a few inches of the wire. In each of the tests indicated in Table I—at 2,050 and 4,100 volts—no measurable deflection could be obtained on the voltmeter, but upon touching the nozzle with the band, when standing on the ground, a slight effect due to the static electricity was noted.

In the demonstration held on the succeeding day results were obtained which agree with those shown in Table II. In each case the nozzle was sufficiently near the wire to cause a solid stream to play on the latter. Just how far the results of a fire hose test with salt water will differ from the above, which were made with fresh water, cannot be said at the present time.

Experiments were also made with streams from hand chemical extinguishers, and it was found that when a solid stream is played on a high potential wire, it becomes a source of danger to the one holding the extinguisher. For instance, the nozzle of an extinguisher was held at a distance of nine inches from a grounded 2,050 volt alternating current line. The difference of potential between the nozzle and ground was 1,500 volts when the extinguisher was insulated from the ground.

Table I.—Voltage to Ground from a Five-Eighths Inch Nozzle

Voltage on Wire	Distance from Nozzle to Wire	Volts between Nozzle and Ground
525	7 ft. 5 in.	20
525	4 ft. 9 in.	38
525	3 ft. 7½ in.	60
525	2 ft. 2 in.	70
525	0 ft. 7½ in.	210
2050	6 ft. 6½ in.	Static
2050	8 ft. 5½ in.	Static
4100	6 ft. 6½ in.	Static
4100	3 ft. 5½ in.	Static

Table II.—Results of Demonstration

Nozzle Size	Voltage on Wire	Distance from Nozzle to Wire—Feet	Volts between Nozzle and Ground
⅝-in.	525	3	Slight indications of static electricity to the hand
1-in.	2300	8	Slight indications of static electricity to the hand
1-in.	4600	10	Slight indications of static electricity to the hand

The Resistance of a Stream of Water

These tests were made to represent actual conditions as nearly as possible by using regular fire hose and nozzles, the latter of the sizes most used—1⅛ and 1½ inches in diameter. The water used was from the condensing tank of the university power plant. It had been softened by the use of soda and lime and probably would have shown a somewhat lower resistivity than average city water. This, however, as will appear later, would not affect the more important deductions made herein.

The investigation took the form of measurements of the resistance of the stream of water between the hose nozzle, which was grounded, and a 12-foot piece of No. 6 copper wire, strung horizontally 10 feet above the ground. The voltage was obtained from one terminal of a 250,000-volt, 50-kilowatt transformer. The midde point of the high tension winding was connected through a low reading ammeter to earth, one terminal was connected to the wire, while the other terminal was open. The required value of the voltage was obtained by the proper excitation of the primary and its value determined by a voltmeter on the primary and the transformation ratio of the transformer. Variation of the frequency between 60 and 45 cycles with 20,000 volts impressed upon a 6-foot stream of water showed that there was no appreciable reactance. The resistance was thus calculated from the current and applied voltage.

The voltage, water pressure and length of stream between the nozzle and the wire were varied, and the effect of each upon the resistance was studied. Variation of voltage produced no well-defined effect upon the resistance within a range between 5,000 and 30,000 volts. In this test water

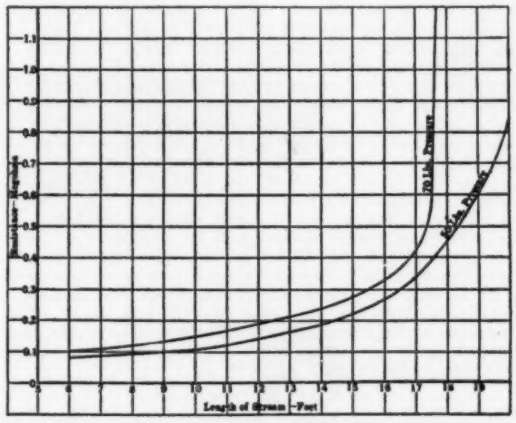


Fig. 2—Curves of Resistance
With varying stream lengths from one and one-eighth inch nozzle, with stream directed onto a 30,000 volt line

pressures from 30 to 70 pounds were used and a stream length of 6 to 15 feet.

Increase of water pressure gave increased resistance. This was slight for 6- and 10-foot stream lengths, but quite marked for 15 feet. It appears that with the higher pressures the stream is less solid, especially at a greater distance from the nozzle.

The really striking and interesting results obtained from the tests, however, came with the variation of length of stream. The results with the 1⅛-inch nozzle are shown in Figs. 1 and 2 for 5,000 and 30,000 volts, respectively, and for different pressures. With 20,000 volts the curves are practically the same as those shown for 30,000 volts. Fig. 3 gives similar curves for the 1½-inch nozzle. In all these curves the resistance increases gradually up to a critical length, which for the 1⅛-inch nozzle is about 17 feet, and for the 1½-inch nozzle 20 feet. Beyond this point the resistance rises suddenly and approaches rapidly to infinity. This critical length is nearly independent of the pressure used, though becoming slightly lower for higher pressures. Observation of the stream of water makes the cause of this critical length clear. It is the point where the stream ceases to be continuous and breaks up into a mass of separate water drops.

As to the bearing of these results, it may be noted that a current of 0.02 amperes is quite painful to most persons, and that .005 amperes is at or beyond the limit of endurance. While the minimum fatal current is very uncertain, it is probable that it would very seldom be less than 0.1 ampere and usually much more. If a stream length of 15 feet and 50,000 volts is taken as an example, the curves show that for a 1⅛-inch nozzle a resistance of about 20,000 ohms would be obtained and hence a current of about 0.25 amperes. Such a current would certainly give a severe shock and in such cases would be dangerous. If, however, a stream length of 20 feet is assumed for a 1⅛-inch nozzle, or 25 feet for a 1½-inch nozzle, the resistance would be 800,000 ohms or more, which for 50,000 volts would give but 0.06 amperes or less, which, while painful, would practically never be dangerous to life. In these calculations the resistance of the body, being only a few thousand ohms, has been neglected.

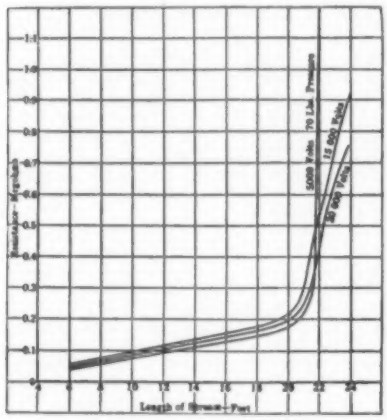


Fig. 3—Resistance Curves
For various voltages with a one and one-half inch nozzle, and 70 pounds water pressure.

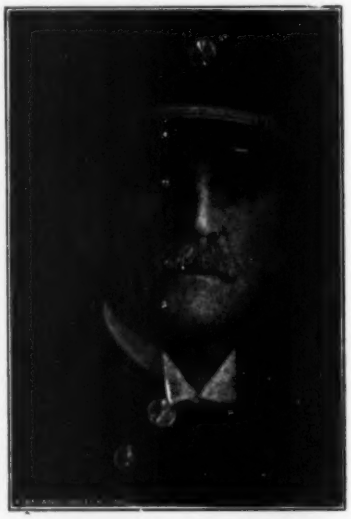
Since high tension circuits should always, when near buildings, be carried on poles that would bring the lines much more than 25 feet from the ground, it would seem that little fear of injury to firemen from this source need be entertained so long as the poles are of proper height and the fireman is working from the ground. If, however, he is working from a metal ladder, or is using a tower which would bring the nozzle into close proximity to the wire, a dangerous shock might be received through the stream.

It may be asked whether the fact that the nozzle is grounded through the stream of water in the hose would not keep up its voltage so near that of the earth that even with the short stream length there would be no danger. With this point in mind the resistance of the path from nozzle to ground through the water in the hose was investigated when the latter was thoroughly insulated from the ground and found to be about 150,000 ohms per 100 feet, from which it would appear that such a ground connection could not be depended upon to shunt much of the current around the man holding the nozzle.

Two firemen were killed and seven injured when Engine 3 of the Dracut, Mass., Fire Department, skidded and struck a telephone pole while responding to an alarm caused by a short circuit in the fire alarm system.

Chief Henry H. Heitman Dead

Henry H. Heitman, Chief of the Waterbury, Conn., Fire Department and one of the best known fire officials in New England, died from a heart attack while at his desk at Fire Headquarters on Field street, on the night of September 19. The Fire Department head was found unconscious by a private in the department who went to Chief Heitman's office to report on money received from department members for the local sick benefit association. Before medical aid could be given to the stricken Chief, he died peacefully.



The Late Chief H. H. Heitman

Chief Heitman was seventy years of age. He was born in Brooklyn, N. Y., in 1864 and came to Waterbury in 1882. After serving four years as a volunteer fireman while a factory worker, he received appointment to the paid department as a hoseman on October 31, 1892. He was advanced to assistant engineer on August 14, 1894, and on July 29, 1897, he was appointed as driver of one of the few horse drawn steamers in the department at that time. His ability as a fire fighter was recognized in 1898 when he was promoted to a Captain on October 12 of that year. On July 14, 1909, he was given the berth of drill master and he held that office until his advancement as Deputy Chief on November 1, 1911. Exactly three years later, November 1, 1914, he was made Chief of Department, succeeding the late Chief Samuel Snagg.

Chief Heitman is survived by his widow, Jane Hughes Heitman; four sons, Henry, Felix, Stewart and Herman; two daughters, the Misses Marge and Meta Heitman; a sister, Miss Meta Heitman of Mt. Vernon, N. Y., and two grandchildren.

Chief Heitman was a member of the International Association of Fire Chiefs and the New England Association of Fire Chiefs. He was active in both organizations.

Upon learning of the death of Chief Heitman, Mayor Frank Hayes of Waterbury said:

"I was stunned, as I believe almost everyone in Waterbury was, at learning of the sudden death of Fire Chief Heitman. He was more than an ordinary fire chief. He was the heart and soul of the Waterbury Fire Department. Fire fighting was more than a career to him; it was his whole life."

With every member of the off-duty platoon in line, the funeral of Chief Heitman was held on September 22 from his late home on Arch Street, Waterbury. The body of the departed Chief was carried by department officers from the home to St. Margaret's R. C. church on Willow street where a solemn requiem mass was held. The remains were escorted by firemen to the family plot in Calvary Cemetery. Fire Department officials from several cities and towns in Connecticut attended the funeral.

THOMAS F. MAGNER.

Chief Fox of Boston Married

Chief Henry A. Fox, of the Boston, Mass., Fire Department, was married recently to Miss Agnes C. Fisher. The ceremony took place in Derry, N. H., just before the Chief started on his vacation and the news did not become public for several weeks. The Chief and his bride are making their home at 1945 Commonwealth Avenue. She was present at the convention of the New England Association of Fire Chiefs in Burlington, Vt., last June and made many friends.

HARRY BELKNAP.

Eleven
point protection

CENTRAL STATION Sprinkler Supervisory Service performs 11 important functions ... in addition to notifying the fire department, automatically, quickly and accurately when water flows from the sprinkler system, it includes these essential safeguards:

IT AUTOMATICALLY REPORTS:

Opening or closing of shut-off valves;
High or low air pressure in dry pipe systems;
High or low water in gravity tanks;
Low temperature in gravity tanks;
High or low air pressure in pressure tanks;
High or low water in pressure tanks;
Power supply to fire pumps cut off.

All electrical circuits are under the constant supervision of the Central Station.

A.D.T. assumes full responsibility for the inspection and maintenance of the entire supervisory system.

Every alarm is investigated immediately by A.D.T. Central Station operatives and is followed closely until normal conditions are restored.

94,230 sprinkler waterflow and supervisory signals were received in A.D.T. Central Stations during 1933... all indicated conditions requiring immediate correction and were speedily and effectively acted upon.

11 POINT PROTECTION, supplied only by A.D.T. Service, assures instant automatic reporting of fires and that sprinkler systems receive the care and attention necessary for successful operation. We shall be glad to send you descriptive literature.

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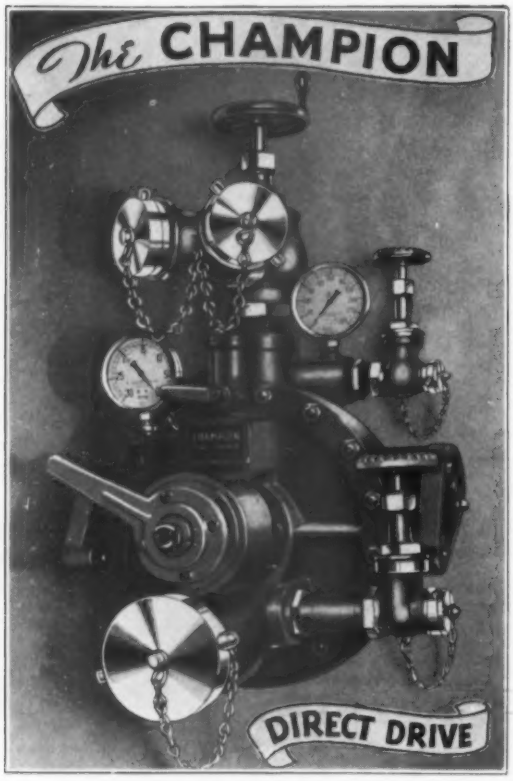
AMERICAN DISTRICT TELEGRAPH COMPANY, 155 SIXTH AVE., NEW YORK, N.Y.

A.D.T. *Protection* *against* FIRE · BURGLARY · HOLDUP

A NATION-WIDE SERVICE

650 Gallons per Minute!

Amazing is right — Overwhelmingly the First Choice of Chiefs Who Will Think It Over.



It is fair to say that in the building of the Champion, nothing is left undone which will in any way contribute to its excellence. If the Champion pump is a veritable masterpiece of engineering practice, it is so because the high principles set for its building, include Floating Power, Ball Bearings, Friction Clutch, Bronze Volute Impeller, Safety Primer, etc.

Capacity Rating: With V8 Ford 650 GPM from nominal hydrants. With Chevrolet or other 1½ Ton Chassis 500 GPM at least. While pumping from suction over 500 GPM with 3½ inch suction hose. High Gauge Pressures guaranteed. ☞ 120 lbs. with 2½ inch hose or ☞ 250 lbs., with leader line or booster hose and tips. In our opinion Champion performance with any motor is unequaled.

TYPE F3 Champion Fire Pump $630.00

Price includes Front-Mounting Brackets, 300 lb. Pressure Gauge, Automatic Safety Primer, Shut-Off Valve, Brass Caps, with plugged inlet and outlet for booster tank connections.

☞ Net Price to Fire Departments, complete with all the above equipment, f.o.b. Chicago... **$315.00**

Siamese Connections, Booster line Valves, and Vacuum Gauge shown in illustration above are extra but cost little more if you prefer to have them attached to pump.

Fast Fire Trucks equipped with Champion Pumps and Booster Tanks, extinguish 80% of all fires ☞ without connecting to fire hydrants or laying out any of their supply of 2½" fire hose.

BUILT TO STAY BUILT

This Chevrolet Chassis including Champion Pump, Steel Body, Booster Tank, Platform Step, Searchlight, Siren, Ladders, Bell, Hose Lights, Fresnel Lights, Firemen's Lantern, Hand Extinguisher, Windshield, Etc. AS YOU SEE IT approximately only $1650.00 ALL COMPLETE and ready to go.

We wish we could get every Chief who is interested in front pumps to study DIRECT-DRIVE. Neither talking, advertising nor pictures can bring out the real feature of this new kind of fire pump. You have only to test a Champion to appreciate the improvements we have accomplished.

The Champion Front Mounted Fire Pump is Easily Identified—IT HAS NO GEARS

It is marvelously hard to believe that on DIRECT DRIVE from the crank shaft this new model Champion will pump 500 GALLONS, or 650 GALLONS PER MINUTE if the hydrant has a good service connection, or lift from suction 500 gallons, or more, per minute. ☞ Water enough at HIGH PRESSURE for 2 to 3 heavy fire fighting hose streams.

If you want COMPLETE SECURITY, accept only a DIRECT DRIVE pump; it may cost you more but it's a sound investment for the future. ☞ You'll never know the regret of hastily (and who isn't in haste at a fire) letting in the clutch and having the pump completely wrecked almost instantly or the motor crankshaft twisted and ruined beyond repair.

Champions! The Greatest Advance in Modern Front Fire Pump Engineering! Secret of the Astounding Stamina!

Modern truck chassis have FLOATING POWER. ☞ Champion Pumps, with direct-drive shafts, FLOAT WITH THE MOTOR! ☞ You can deliberately set a Champion OUT OF ALIGNMENT with the motor and NOTHING HAPPENS! Think what that means!

Take the clutch that engages the motor to the pump. How fatal it may be. Examine well the Champion Clutch! Notice it is out in front. Because it's a FRICTION clutch you don't have to stop or idle down the motor! Because it's a FRICTION clutch there are no "dogs" or teeth to be cautiously meshed.

If you would compare the primer with anything you know of you would say it could not possibly drown the motor (or kill it) BECAUSE IT HAS NO FLOATS.

Make it Plain to Your Committeemen that Price Means Nothing to You as Against Your Community's Security

Tell them you want the NEW Champion Centrifugal that Pumps Clean or Dirty water at high presssure from hydrants, ponds, rivers, cisterns or booster tanks! Tell them you want the DIRECT-DRIVE-NO-GEAR pump!

Tell them you want the pump it is impossible to wreck when anybody excitedly throws in the clutch to start it!

Insist that the pump shall drive from floating power motors, without having to bolt down the motor to try to keep it in line with the pump shaft!

Make it plain you want the primer that has NO FLOATS, and is AUTOMATIC and SAFE.

Then your new fire pump will have all the newest and all the important safety factors.

Your Purchase Price Includes Darley Maintenance Service! Try a Champion on 30 DAYS' APPROVAL

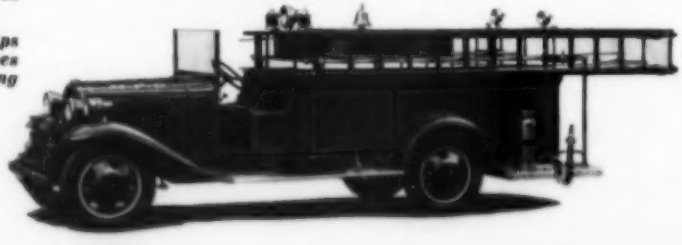
At no extra charge W. S. Darley & Co. customers' maintenance service keeps the Champion Pump, its every part and every function, at its natural high point of efficiency. And, should any part show any defect, or any undue wear, for 5 YEARS, a replacement or new part will cost you nothing!

We'll gladly ship on 30 days free trial. ☞ You be the judge if there is any better front mounted pump AT ANY PRICE. ☞ If there is, return ours and we will pay the freight both ways.

Build Your Own Fire Truck for City or Rural Service!

It's Easy! Buy any chassis from your local dealer and besides the best in pumps you can get the best in equipment from us. Or, buy your chassis from YOUR DEALER, who will have it delivered direct from factory to us and we will furnish Pump, Body, Booster Tank, Paint, Siren, Hose, Axes, Nozzles, etc.—anything you desire ☞ and, at the outside the cost will be only a few hundred dollars.

Your job will look like this when you come to drive it away.



W. S. DARLEY & CO.

THE BEST IN FIRE DEPARTMENT EQUIPMENT
2810 Washington Blvd. CHICAGO

"MORRO CASTLE" OF WARD LINE DESTROYED BY RAPID FIRE AT SEA

Large Loss of Life Caused by Inadequate Training of Crew in Devices Provided on Ship to Prevent and Detect Smoke and Fire

FIRE which broke out at sea from an unknown cause and in an undetermined manner caused a loss of life of over 137 persons on the passenger and crew list of the Ward Liner "Morro Castle," September 8, and completely destroyed the $5,500,000 boat constructed at Newport News, Va., in 1930. As far as ocean liners go it was considered a small boat but nevertheless placed in the de luxe class and believed to be provided with the latest devices for fire prevention.

The boat was returning from a pleasure cruise to Havana. When the boat was off Asbury Park, N. J., fire broke out. A New York fireman who was on the boat stated at a government inquiry that the fire started at 12:45 a.m. This was about two hours earlier than the time fixed by other witnesses. The cause is unknown, but those conducting the inquiry, place great emphasis on the fact that the crew used an inflammable liquid polish for the metal, and that the use of this illegal polish was general information on board. The ship also carried two hundred gallons of enamel paint that were used on the boat. The cargo consisted of 750 tons of perishable fruits.

Although considerable wood was used in the interior construction of the boat, it was considered well protected against fire. There were fire doors and screens which were never closed by the crew, either because of the panic which followed the fire outbreak or due to incompetence of crew. On a lower deck of the boat was a switchboard in a special room, which was supposed to have been attended day and night. Tubes permitted the operator to pipe fire-extinguishing gas to the threatened part of the ship. The boat had an automatic alarm designed to indicate the position of a fire.

Flames had been making headway for about one-half hour before the engineering crew had knowledge of the fire. The New York fireman said that he had helped to man a hose line and performed other fire-fighting service. Witnesses testified that the water pressure was poor and the hose in bad condition.

Fire spread with great rapidity. It seemed to envelope a large part of the boat at about the same time so that at first the blaze was believed due to incendiaries. This theory has not been substantiated. Intense heat, pungent smoke, and the weakened condition of the passengers who were troubled by seasickness, prevented many of them from reaching the upper decks. Many passengers were trapped in their staterooms. Women who were concerned about their flimsy night attire, and returned to their rooms for more clothing, never were seen again. This is believed to have caused part of the large life loss.

On the A deck, the intense heat and blinding smoke made it impossible to launch many of the life boats, and those that were lowered were practically empty. A boat which had a capacity of seventy persons was beached with four persons in the boat. Passengers lacked knowledge on how to properly don a life belt. Many jumped overboard without such protection. It is believed that when the passengers were directed, or because of panic, jumped overboard, so many leaped over at one time that the bodies struck in the descent and many persons fell in a stunned condition and were drowned. Others jumped before the boat was anchored, and were caught in the swirl of the twin propellers.

Evidence gathered at the government inquiry shows a lack of complete training on the part of the crew. Boat drills were not properly attended and one incident was reported of the Captain going below to get out twenty-two members of the crew. Passengers were not directed to participate in drills nor instructed how to wear a life belt. Members of the crew were ignorant of their fire stations, had little or no knowledge of how to handle a hose stream, and had meagre information of the importance of fire doors and their functions, and how to fight fires.

A life loss of over 137 and a property loss of over $5,500,000 was necessary to drive home to the shipping industry that it is not enough to provide mechanical and electrical safeguards to prevent the spread of fire. Men skilled in the operation of such appliances must be provided, and frequent drills must be held so that the officers may have some assurance that the crew is properly trained should an emergency arise. Both crew and passengers ran about in a wild and panicky state, neither knowing where they should go.

The Smoldering Hull of the "Morro Castle"

Fire completely destroyed the upper part of the superstructure. The lower decks were not badly damaged, although smoke made it impossible for persons to remain below. The boat was beached off the Convention Hall, Asbury Park, N. J.

The boat had many passageways, and it was easy to become confused. There were few on hand to direct people to the most accessible and safest means of egress.

The boat carried a crew of 240 and 318 passengers. This is considered the worst catastrophe at sea since the Vestris went down off the Virginia Capes, November 26, 1928.

Pacific Coast Fire Chiefs Meet

Chiefs attending the forty-first annual convention of the Pacific Coast Association of Fire Chiefs at Pasadena, Cal., September 11-14, were welcomed by Gov. Frank F. Merriam from the state capital through a special radio hookup. He paid special tribute to the excellent work of Jay W. Stevens, Secretary of the association and State Fire Marshal.

Chief Charles J. Brennan, San Francisco, told how the Fire Department met the crisis in the general strike last June. He explained the department's part in preventing chaos and disorder.

A gas demonstration was made by officials of the Union Oil Company cooperating with Chief Ralph Williams of Fresno.

A paper by Chief John F. Healy, Denver, Col., on, "Radio paper on "Testing Fire Engines," was read by Herbert Communications for Fire Departments," was read and a Raines, Engineer, National Board of Fire Underwriters.

Dudley Monk, Chairman, Fire and Police Pension Fund Committee, Pasadena, outlined the features of the fire and police pension plan as applied to municipalities the size of Pasadena. In his talk he touched on a representative pension board, a living annuity for pensioned families, and an optional retirement age.

The following officers were elected: Chief Wm. P. Cooper, Richmond, Cal., President; Chief E. J. Treese, Raymond, Wash., First Vice President; Chief Lloyd B. Canfield, Beverly Hills, Cal., Second Vice President; Chief Jay W. Stevens, San Francisco, Cal., Secretary; Chief Charles E. Smith, San Francisco, Cal., Assistant Secretary and Chief Ed Steinhauer, Redding, Cal., Treasurer.

Four hundred business men of the city, members of the United Service Clubs which includes Kiwanis, Optimists, Lions, Rotary, Civitan and Knights of the Round Table,

entertained the Chiefs at a luncheon held at the Masonic Temple.

Walter Putnam, Building Superintendent, Pasadena, described the benefits of earthquake-proof and proper building restrictions in relation to fire protection. He said ordinary brick buildings should be condemned as being unsafe.

Jean Harlow and Jimmie Durante, motion picture stars, were invited guests at a ball held in the Civic Auditorium at which there were fire department orchestras from Pasadena, Glendale, San Diego and Los Angeles. A parade was held through the down town business section of the city.

During the convention there were formal gatherings of fire-seared orders of the Snapping Turtles and another division called the Snapping Turtlettes.

WHAT'S BURNING?

THE following list includes fires of $50,000 loss and over in the United States and Canada, for the month of September, 1934. These figures, compiled from the telegraphic reports are based on estimates made at the time, and are subject to later investigation and consequent revision. Taken as a whole, however, they are an approximately correct view of the losses incurred. The figures represent loss in thousands of dollars.

Month Ending September 30	Loss in Thousands of Dollars
Streator, Ill.—Methodist Church destroyed	80
Belmar, N. J.—Plant of Sterner Lumber Co. damaged	125
Kankakee, Ill.—Several business establishments	80
Latrobe, Pa.—Plant of American Cynamid Chemical Co	50
Mt. Clemens, Mich—J. C. Fleming ice cream plant destroyed	80
Chillicothe, Ohio—Mead Corp. laboratory	65
Modesto, Cal.—Warehouse of Grange Co. destroyed	50
Wallace, Idaho—Two bldgs. destroyed, two damaged	35
St. Catharines, Ont.—Residence of D. Slark, Louth Township	25
Kansas City, Mo.—Mill of Tarkio Molasses Feed Co	150
Bartlett Springs, Cal.—Four hotels and fifty cottages destroyed	500
Nome, Alaska—Entire business section, numerous residences	1,500
San Luis Obispo, Cal.—Atascadero Inn, 20 miles north	200
Miami, Fla.—Vereen Hotel building damaged	50
Little Rock, Ark.—Property of Southern Cotton Oil Co	80
McArthur, Ohio—Vinton County Children's Home destroyed	25
Detroit, Mich.—Cadillac Paint Co. plant damaged	80
E. St. Louis, Ill.—St. Elizabeth's Parochial School	50
Standard, Alta.—Atlas Lumber Co. plant destroyed	80
Dietrich, Idaho—School bldg. and gymnasium, destroyed	50
Eugene, Ore.—Whse. and kilns of J. W. Seavey, destroyed	150
Fredericksburg, Va.—General textile mills destroyed	125
Flintridge, Cal.—Dwelling of Henry S. MacKay, Highland Drive	50
Cleveland, O.—Property of Barrett Co	60
Cortland, Oreg.—Bldg. of Allis-Chalmers Mfg. Co	80
New Orleans, La.—Yards of Schill Lumber Co	50
Memphis, Tenn.—Property of Slumber Products Corp	170
Akron, Mich.—Elevator of Wallace & Morley, adj. property	50
Monroe, Ga.—Whse. of Launius Bros. destroyed	60

West Honored by Iowa Firemen

William A. West, of Boone, was elected President of the Iowa Firemen's Association at the fifty-seventh annual convention held at Creston, Ia., September 18-19. The firemen heard talks by John Strohm, State Fire Marshal; Dan Turner, former Governor; Mrs. Alex Miller, Secretary of State, and Ray Murray, State Secretary of Agriculture. About three hundred persons attended the banquet.

Officers elected, in addition to Mr. West, are Dolph Becker, Oelwein, First Vice-President; V. Pyle, Chariton, Second Vice-President; Wright Hedges, Atlantic, Third Vice-President; A. G. Dannells, Denison, Fourth Vice-President; Paul A. Soener, Independence, Secretary; E. V. Lindquist, Des Moines, Treasurer.

During the convention there were various contests and an exhibition of fire drills at the schools.

At the Milwaukee Convention Ed Wynn Sat Down with Chief John Evans (Left) of New Orleans and Chief Selden R. Allen (Right) of Brookline for a Little Private Swapping of Stories

Eastern Fire Chiefs Hold Convention

Chief Ross B. Davis, Philadelphia, President of the Eastern Association of Fire Chiefs, presided at the seventh annual convention held at Hagerstown, Md., September 14-16. The association has members residing in New York, New Jersey, Pennsylvania, Delaware, District of Columbia, and Maryland. The visitors were welcomed by Mayor Irvin M. Wertz and the reply was made by John Kenlon, former Chief of the New York Fire Department.

Chief Ross B. Davis

Better cooperation between paid and volunteer fire departments was urged by Chief Ross B. Davis. He said the Chief has the most responsible position of any executive. While in business, decisions may be reserved for a later date, the Chief, when life and property are involved, must make his decisions at once.

Chief Warr, Baltimore Salvage Corps, read a paper on, "Conservation and Salvaging of City Property."

A series of firemen's contests was held at City Park and a demonstration was held at City Park circle. A trip was made over the Antietam Battlefield on Sunday morning.

Charles E. Clark, Wayne, Pa., was elected Secretary, to fill the vacancy caused by the death of F. E. Soulé, of Coatesville, Pa. All the other officers were re-elected. They are Chief Ross B. Davis, Philadelphia, President; Deputy Chief John J. T. Waldron, New York City, First Vice-President; Chief Edward H. Warr, Baltimore, Second Vice-President; Ex-Chief Richard Lee Smith, Pittsburgh, Treasurer.

CONVENTION DATES

Oct. 16-18—ILLINOIS STATE FIREMEN'S ASSOCIATION. 48th Annual Convention, Granite City, Ill. Secretary, Assistant Chief Roy W. Alsip Fire Department, Champaign, Ill.

Oct. 24—FIRE CHIEFS EMERGENCY PLAN OF FAIRFIELD COUNTY, CONN. Next Regular Meeting, Fire Headquarters, Shelton, Conn. Secretary, John Moehring, Toms Road, Stamford, Conn.

Oct. 25—FIRE CHIEFS EMERGENCY PLAN (Westchester County, N. Y.). Next Regular Meeting, Snowden Ave. Fire House, Ossining, N. Y. Secretary, Captain Walter M. Dawkins, Harrison, N. Y.

May 13-17, 1935—NATIONAL FIRE PROTECTION ASSOCIATION. 39th Annual Meeting, Atlanta, Ga. Secretary-Treasurer and Managing Director, Franklin H. Wentworth, 60 Batterymarch Street, Boston, Mass.

June, 1935—NEW ENGLAND ASSOCIATION OF FIRE CHIEFS. 13th Annual Convention, New Bedford, Mass. Secretary-Treasurer, Chief John W. O'Hearn, Watertown, Mass.

June 11-14, 1935—ILLINOIS FIRE COLLEGE. 11th Fire College, under auspices of Illinois Firemen's Association. Address, Assistant Chief Roy W. Alsip, Secretary, Illinois Association, Fire Department, Champaign, Ill.

July, 1935—MICHIGAN STATE FIREMEN'S ASSOCIATION. 61st Annual Convention and 7th Annual Fire College, Detroit, Mich., probably in middle of July. Secretary-Treasurer, Statistician and Director, Fire College, Charles V. Lane, Charlotte, Mich.

July 16-17, 1935—MARITIME FIRE CHIEFS' ASSOCIATION. 21st Annual Convention, Moncton, N. B. Secretary-Treasurer, Capt. K. J. MacRae, Salvage Corps and Fire Police No. 1, Saint John, N. B.

July 29-Aug. 1, 1935—WEST VIRGINIA FIRE SERVICE EXTENSION SCHOOL. 5th Annual School, West Virginia University, Morgantown, W. Va. Address Secretary, W. Va., Fire Chiefs' Asso., C. B. Powell, Romney, W. Va., or Prof. Lewis V Carpenter, Director, at University.

July 30, 1935—WEST VIRGINIA FIRE CHIEFS' ASSOCIATION. 4th Annual Meeting, West Virginia University, Morgantown, W. Va. Secretary, Chief C. B. Powell, Romney, W. Va.

Dressy Uniform Shirts

Made of medium blue Tub Test (fast-color) chambray or navy blue Tub Test percale; with collar attached or with two detachable laundered collars to match. This SIGNAL, now specified by Fire Chiefs all over the country, is favored because it is both dressy and practical.

If your Dealer cannot supply, write for prices direct.

JOHN RISSMAN & SON
SIGNAL SHIRT DIVISION
CHICAGO

QUALITY FIRST — Signal — UNION MADE

REG. U.S. PAT. OFF.

This new

M·S·A HELMET

has "everything" a fireman's hat should have...

Molded in one-piece from durable, highly fracture-resistant micarta, heavily reinforced at crown and brim edge . . . non-conductive to electricity and permanently non-softening from water, chemicals or perspiration . . . self-ventilated, cool—unusually light in weight, snug-fitting and comfortable . . . equipped with detachable zipper-operated ear-lugs; a chin strap designed to simplify donning the helmet over a gas mask, and other superior features . . . always smart and trim in appearance—the new M.S.A. Fireman's Helmet truly answers every demand of fire-fighting service. ¶ Write for the new Fireman's Helmet Bulletin FX-I.

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M.S.A. Products include Breathing Apparatus . . . Inhalators . . . Masks of all types . . . Gas Indicators . . . Gas Detectors . . . M.S.A. Safety Goggles . . . M.S.A. Protective Hats and Caps . . . Edison Electric Cap Lamps . . . Safety Clothing . . . First Aid Equipment . . . Submarine Escape Apparatus. Descriptive Bulletins will be sent on request.

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DEPENDABILITY

that's the answer

Two uniforms may contain the same cloths, linings, canvas, buttons, YET one has modeled into it the expert workmanship of a master designer, while the other is lacking entirely in style and appearance.

SMITH - GRAY Uniforms are recognized everywhere for their style, character, workmanship and lasting appearance.

Write for Prices and samples.

Fire and Police Specialists

UNION MADE

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740 BROADWAY NEW YORK

COVER'S
NOD and SHAKE
GAS MASK

Carry It in Pocket. Slip on in a Jiffy. Positive Protection to Eyes Against Smoke.

Price $48 per Dozen

Upon receipt of $4.00 one will be forwarded as a sample, postpaid.

H. S. COVER
Station A
SOUTH BEND, IND.

BRUNSSEN CAPS

First Choice in Many Fire Departments

There seems to be a trend toward the 8 point cap for fire departments. It is one of the wide variety of caps by Brunssen. CATALOG AND PRICES ON REQUEST.

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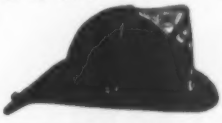
COMFORT AND SECURITY
WITH THE
CAIRNS
LOW HEAD—CUSHION LINED
HELMET



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Never go to a fire without the protection of a good helmet. It may save your life.

Now is the time to start a new Fire Record Book. 3 sizes. 350-700-1400 alarms.

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HELMETS — CAPS — BADGES, RUBBER COATS, ETC.

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Puts Out
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Quickly

We will send an initial order of 3 doz. boxes of SAMBO and bill you $18. You can pay in 30 days.

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Highly Endorsed by Fire Chiefs Everywhere!

Chief Henry of Lexington, Ky. writes:

"The 'Fire Chief's Handbook' is the work of one of vast experience. Every fireman should have a copy for study and reference."

Chief Gambrell of Dallas, Texas writes:

"It is very instructive and helpful. We find this book very convenient to refer to in our school work."

THE **FIRE CHIEF'S HANDBOOK**

By FRED SHEPPERD

In Collaboration with the EDUCATIONAL COMMITTEE *of the* INTERNATIONAL ASSOCIATION OF FIRE CHIEFS

THERE have been books on fire-fighting, but never anything so complete and authoritative as the "Fire Chief's Handbook." This book, a gold-mine of practical, helpful data, gives a reliable, up-to-the-minute answer to almost every question that might come up in modern fire-fighting practice.

For progressive fire chiefs, interested in up-to-date fire fighting methods, the "Fire Chief's Handbook" will be a mighty valuable reference guide. It gives to ambitious fire department officers and men, in plain, understandable form, information that should prove extremely helpful in preparing for promotional examinations. In fact, it is a book every fighter needs and ought to have. *The Edition is Limited—Better Order Your Copy Today.*

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If the book isn't what you expected, return it within 5 days and your money will gladly be refunded.

Here are some of the subjects covered:

- FIRE DEPARTMENT TOOLS AND EQUIPMENT
- MOTOR FIRE APPARATUS PUMPS
- FIRE EXTINGUISHERS AND THEIR USE
- FIRE STREAMS
- FIRE-FIGHTING METHODS
- FIRE STATION DESIGN
- TRAINING OF FIREMEN
- SALVAGE OPERATIONS
- BUILDING INSPECTION
- VENTILATION AT FIRES
- CARE OF FIRE HOSE
- CHEMISTRY OF FIRE
- HEAT AND ITS ACTION
- DRILL TOWERS
- DRILLS AND EVOLUTIONS
- FORCIBLE ENTRY
- EXPOSURES
- STANDPIPE WORK AT FIRES

—and Many Other Things

Fire Apparatus Draws World Fair Crowds

Daily demonstrations of fire apparatus at the exhibit of Mack Trucks, Inc., at the World Fair, Chicago, has never failed to draw large crowds of interested spectators. A professional steeple jack performed at the tip of an elevated 85-foot ladder. A Mack pumper has been operating continuously since it was placed on exhibition early in June.

Mack Fire Apparatus and Trucks on Exhibition at World Fair

Water is pumped from a cistern and discharged through two 2½-inch lines back into the cistern. The company estimates that the work of the ladder and the pumper at the fair so far is equivalent to thirty-five years' work in a regular department.

Nome to Be Rebuilt with Wide Streets

A new Nome, Alaska, is to arise from the ashes of the $3,000,000 conflagration which practically destroyed that community. Plans were completed by an FERA committee for a new city with wide streets, a new business district and modern buildings. Streets will be ninety feet wide, and Front Street will be moved fifty feet back from the beach of the Bering Sea. Work will be started in the spring, but now temporary structures are being erected in which to house the business places during the winter.

New Line of Firemen's Shirts

A fall and winter line of Signal uniform shirts for firemen, has been announced by John Rissman & Son, 841 Blue Island Avenue, Chicago, Ill. This line includes the twin-collar model in sizes from 14½ to 18.

A company representative states, "The shirts are made of medium blue, heavy fine yarn, fast color chambray and are guaranteed not to shrink. They are also made in navy blue tub test percale. We are featuring in our line for the first time, slacks of corduroy and whipcord in a wide range of colors. At their popular prices these slacks are just the thing for work or play, along with the newest styles and colors in the most complete line of suede, moleskin, whipcord, windbreaker shifts and flannel shirts."

Voice Amplified 1,000,000 Times

A loudspeaker so powerful that it can amplify the human voice 1,000,000 times and which may find application in the Fire Department field, has been developed by the Western Electric Company.

Measured at the horn's mouth, sound is about 1,000 times louder than the roar at the foot of Niagara Falls. In spite of the tremendous amplification, the designers have obtained clarity. The giant voice, it is said, can reach firemen working inside buildings amid the crackle of flames. An officer on the outside of a burning building could direct the operation of the men within and facilitate rescue work.

The loudspeaker has been used aboard the Coast Guard Cutter Tampa at the International Yacht Races to warn shipping off the course.

Gamewell Elects Directors

At the recent annual corporation meeting of the Gamewell Company, Newton, Mass., the following Board of Directors were elected: Roger W. Babson, Benedict J. Baker, William G. Besler, Charles P. Clifford, Eben H. Ellison, Jr., Samuel L. Fuller, Gifford K. Simonds, Charles E. Spencer, Vincent C. Stanley.

Arson as a Livelihood

Chicago police arrested a fifty-seven-year old woman who confessed that she specialized in arson to support her six children and nine grandchildren. She was acquitted on an arson charge four years ago, and was one of ten persons seized as suspects in a ring of fire-setters. The woman has admitted setting fire to more than a dozen business buildings and sharing in the insurance collected.

Idaho Firemen Meet at Rupert

Chief J. C. Boyd, Wallace, Ida., was elected President of the Idaho Firemen's Association at the convention held at Rupert, September 4-6. The other officers are Fred Margetts, Rupert, First Vice-President; L. T. Lessinger, Napa, Second Vice-President; George Westcott, Kellogg, Secretary-Treasurer; Trustees, C. A. Nibert, Malad; H. E. Conine, Burley, and R. H. Stewart, Buhl.

An invitation was accepted to meet with the Washington State Fire Chiefs' Association and the Washington State Firemen's Association at Spokane in June. The convention closed with a banquet and dance.

Denver Issues Fire Prevention Sheets

It is not uncommon for a city to issue printed literature to call attention to Fire Prevention Week, and the hazards that result when simple fire prevention rules are ignored. It is, however, uncommon for a city to resort to the simple medium of mimeographed sheets, and to turn out printed matter that will be remembered for many weeks to come.

P. J. Boyne is Chief of Fire Prevention Bureau, Denver Fire Department. His department has released a set of five mimeographed sheets which many departments should secure as models of fire prevention propaganda. Each page has a number of simple sketches, and even a cartoon by "Art" Espey, which originally appeared in FIRE ENGINEERING, has been reproduced. The Bureau lists the causes and the number of fires for 1933, and presents facts for the resident to show that fire prevention pays. N. N. W.

W. H. Wilson, Monroe City, Mo., is completing his fortieth year as Chief of the Fire Department.

A Pile of Junk Although the Cars Were New

This is all that remained of a consignment of automobiles after a fire destroyed the warehouse at Buffalo, N. Y., in which the vehicles were stored. The cars had just been taken from lake boats. The loss was estimated at $400,000.

Maupin President of Arkansas Firemen

R. F. Maupin, of McGehee, was elected President of the Arkansas State Firemen's Association at the annual convention held at Monticello. The other officers are J. McJunkins, Hot Springs, First Vice-President; L. O. Wallick, Monticello, Second Vice-President; V. Lemly, Russellville, Third Vice-President; H. D. Compton, Little Rock, Secretary-Treasurer, and W. E. Morgan, Morrilton, trustee for three years.

Young American Fire Preventers

Two hundred boys, and some girls, are meeting regularly in Pontiac, Mich., fire stations and are being taught the elements of fire prevention and what constitutes fire hazards. They are members of the Young American Fire Preventers, an organization of which Chief Frank W. Kuhn of Pontiac is the unofficial godfather.

The theory behind the idea is that there are many fire stations throughout the country that are now not in use and which could be used as club houses for these young people who assemble to become fire preventionists. The association is growing in Michigan and soon will spread to Colorado. Full details of the plan may be obtained by writing to the national director, Fred L. Shaw, 544 Buhl Building, Detroit, Mich.

Fairfield County Chiefs' "Plan" Meets

The first meeting of the season of the Fairfield County, Conn., Fire Chiefs' Emergency Plan was held at Fire Headquarters, New Canaan, Conn., on the evening of Wednesday, September 26, with a goodly number of Chiefs and other Fire Department officials present. Chief Daniel Knickerbocker, Springdale, President of the Plan, presided, and the members were welcomed by Mr. Sutton, Borough Warden of New Canaan, and William Lahey, President of the local Fire Department. Chief Veit, of Stamford, spoke of the efforts to form a Chiefs' Plan in New Haven County, and said that progress was being made in that direction.

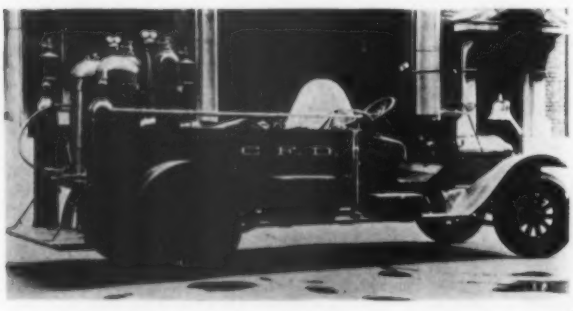
Chief Gisborne reported for the Oil Burner Code Committee, and Chief Veit suggested that as the Westchester Plan was working on such a code, that it would be well to wait until that body had completed it and then take it up. Three new members were elected to the Plan.

Chief Brender brought up the subject of the sealing of back doors of taverns by the order of the Liquor Control Authority of the state, and pointed out the hazards connected with this practice. Chief Veit said that the matter had been brought to the attention of both the Authority and the State Police, but that no encouragement had been received. He suggested that every Chief in the county should write to the Liquor Control Authority and protest against the doors being closed. Chief Hubbard, of Greenwich, also spoke of the hazard and said it was hard to move the Liquor Control Authority in the matter. It was finally moved that every Chief should send a letter to the Authority and to the State Fire Marshal.

Much discussion followed on the question of who was exempt from the poll tax by virtue of membership in Fire Departments. It was finally decided that all active members were exempt.

A demonstration of various types of oil burning furnaces was given by Messrs. Maynard and Johnston, of the Petrol Heat and Power Company.

On invitation of Fire Commissioner Clifford Merwin, it was decided to hold the next meeting at Shelton, Conn., on the evening of Wednesday, October 24. Refreshments were served after the meeting by courtesy of the New Canaan Fire Department.



Special Type Fire Apparatus in Service at Chicago

* The Chicago Fire Department has a White chassis on which is mounted two 350-gallon DuGas compound tanks with their associated gas pressure cylinders, and with two reserve pressure cylinders carried on the rear step. Each unit has its own hose basket, so that two lines may be used simultaneously.

Correspondence

Save the Ship or Save Lives?

To the Editor:

The "Morro Castle" disaster should give the steamship operators much food for thought. FIRE ENGINEERING can be of great assistance in bettering fire fighting methods on shipboard.

As a student at Yale I was a cadet engineer on a steamship. I was a member of the engineering force on naval vessels and have made many ocean trips as a passenger. Besides I have been engaged in making equipment to comply with U. S. Steamboat Inspection requirements for the past twenty years.

I can assure you that officers or crew have not had nor do they have adequate knowledge concerning fire-fighting as firemen ashore understand the subject—I mean data on fire streams, effective handling of the lines, and the principles of extinguishing fires.

A fireman's first duty is to save life. A seaman's first duty is to save his ship. This should be rectified. The traditions of the sea have always compelled "saving the ship" until it has been ingrained in every officer. Of course, saving the ship involves saving life, but the means, practices and methods of life saving have been so subordinated that it has become very much a secondary responsibility.

It certainly is a matter of first importance both as regards saving the ship as well as life saving, to have all officers study accepted methods of fire-fighting, how to handle hose lines and how to train the crew in the fundamentals of fire-fighting, similar to the procedure of Fire Departments ashore. Due to conditions at sea, it would seem far more important to have efficient fire-fighting service than on land.

I believe if a study was made of present methods and equipment on board ship for fighting fires, aside from the use of live steam, woefully inadequate conditions would be found. The very nature of ship construction makes sprinklers mandatory on all superstructures, for a fire in that part of the boat can divide the ship in two and stop its operation.

Very truly yours,

FRANCIS G. HALL JR.,
Roslyn, Pa.

City Fire Alarm Extensions Encouraged

The extension of municipal fire alarm system through the use of master type fire alarm boxes in schools, hospitals, places of public assembly and other bad risks, was endorsed by the Pacific Coast Association of Fire Chiefs. They passed the following resolution at their recent convention held at Pasadena, Cal.:

Whereas, Speed of notification and accurate identification of the location of a fire is essential to its proper control and extinction, and

Whereas, The use of fire alarm master boxes with auxiliary stations is a great aid in accomplishing these results, particularly for schools, hospitals, places of public assembly and other bad risks,

Be it therefore resolved, By the Pacific Coast Fire Chiefs in Convention assembled that it approve and endorse the use of fire alarm master boxes properly designed and installed, with such restrictions as may be required by the Fire Chief of the respective municipality, town or fire district for such use.

Armin E. Miller, First Assistant Fire Chief, Spokane, Wash., died of a heart attack while at a local hospital where he had been undergoing treatment for a heart illness. He had been a member of the department for twenty-four years. Chief Miller is survived by his widow and two sons.

Better your record with Shuredry SALVAGE COVERS

Fully 75% of the fire loss is due to water damage. Shuredry Salvage Covers are an essential part of the equipment of progressive Chiefs everywhere. You can better your record, too, by using these covers.

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PATENTED

Ready for action. Note how arms are left free.

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A large opening permits quickly and easily refilling the INDIAN FIRE PUMP, from stream or faucet. As it uses only clear water, no expensive chemicals, it can be refilled continually during action.

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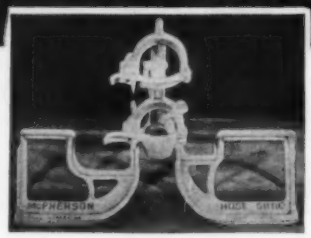

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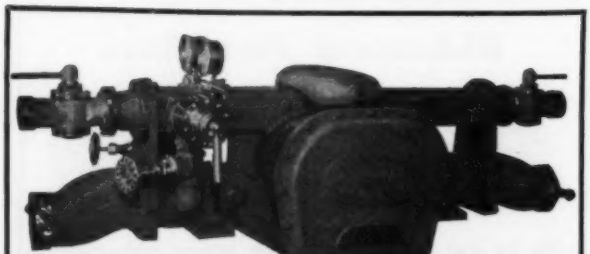

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FALSE ALARMS

JOHN JONES' HOUSE'S BURNIN' UP!
TELL HIM TO BRING IT OVER AN' WE'LL WET IT DOWN GOOD!
SO'M I!
THE BOOSTER TANK'S FULLA BEER.
T' HELMET IT!
F.D.
Fire dept Property
BOOZE PERMIT

—*Drawing by "Art" Espey*

Suppose the Fire House Should Become a Social Club

In order to increase the social features of the fire station and incidentally also to augment the company funds, one volunteer fire company is trying to secure a permit to sell beer. The condition pictured by "Art" Espey may or may not follow.

NO ADVANTAGE

The Rotary Club had secured a prominent resident at the county seat to talk at their weekly luncheon. He arrived early and it became the duty of the President to entertain him. He took him for a ride to show him the town. The visitor remarked at the number of houses on one street that were vacant.

"That's because of the fire house there."

"That's strange. What's that got to do with it?"

"The band practices there."

Cavemen used to knock girls senseless. With some, that isn't necessary now.

SWEET REVENGE

Perkin's wife has a queer way of getting even with the telephone company. She uses her car to knock down their poles.

It is not always true that young people are spendthrifts. A boy and a girl can start down a country road in a car about dusk and be gone until past midnight on a gallon of gas.

NOT FAVORED

Economy moves by the City Council had broken the morale of the men. Instead of working for promotions, which were promised as soon as the city secured more funds, they were content to idle their time away. The Chief thought he would give his men a pep talk to change their ways.

"Look here, men," he said. "When I was a fireman I thought nothing of studying five hours a day in order to win my promotion."

"To tell you the truth, Chief," replied one, "we don't think so much of it ourselves."

UNHAMPERED

The annual report of the state firemen's association was received at the fire house. It was picked up by one of the new members of the station who was still strange to certain features of department life. He went over to another fireman.

"What does it mean when it says in the report that some man went to a convention as a delegate-at-large?"

"It simply means that his wife didn't go with him."

Sign on drug store window: Take home a brick; you may have company.

A REGULAR BOUT

Some one called the Chief at his home to ask about his wife, who was President of the Ladies Auxiliary of the department.

He answered the greeting in a cordial manner and said:

"My wife is not at home. She's out with a bunch of prizefighters."

"Prizefighters," exclaimed the startled person at the other end of the wire.

"Yes. She went to a bridge party."

The repair shop mechanic never fails to hear Opportunity knocking.

THE COMPLAINT

The automobile stopped in the middle of the road at the intersection just as the apparatus came screeching up the avenue. The traffic policeman waited until the apparatus went by, and then with all his pent-up fury, approached the motorist.

"What's the matter with you?" he roared.

"I'm well, thanks; but my engine is dead."

Courtesy, Life

KING HONORED BY MASSACHUSETTS FIREMEN AT HOLYOKE CONVENTION

Report Given of Various Bills Passed by Legislature Affecting Status of Firemen—Life Membership Presented to T. F. Griffin

By Harry Belknap

DEPUTY Chief Joseph J. King, Lawrence, was elected President of the Massachusetts State Firemen's Association at the closing session of the fifty-fifth annual convention which was held in Holyoke September 11-13 at the Hotel Nonotuck. The other officers chosen were: First Vice-President, F. T. J. McNamara, Swampscott; Second Vice-President, Edward Rhinehalter, Quincy; Sergeant-at-arms, John Adams, Worcester; Directors, Louis L. Shea, Fall River; Michael J. McGonagle, Boston, and William C. Mahoney, Peabody.

Speakers at the Sessions

The speakers at the opening session were Dr. William H. Ryan, Chairman, Board of Fire Commissioners, Holyoke; B. F. Perkins and Otto M. Dreikorn, Fire Commissioners, Holyoke; Charles E. Andrus, President, Holyoke Chamber of Commerce, and Chief William C. Mahoney, Peabody, who replied to the addresses of welcome in behalf of the association.

On the second day the speakers were Senator Frank Hurley, Holyoke; James M. Hurley, State Commissioner of Civil Service; Representative William E. Kirkpatrick, Holyoke; Thomas F. Galvin, Commissioner of Public Safety, Lawrence; County Treasurer John J. Murphy, Holyoke; Representative Edward J. Kelley, Worcester; Congressman William J. Granfield, Springfield; and Mrs. Frances Coakley, Wakefield, who told of the work accomplished during the past year by the Ladies' Auxiliary of the Massachusetts State Firemen's Association. The annual memorial address was given by Rev. Fr. Maurice, C.P., West Springfield.

It was voted to appoint a committee to draw up a bill for a general contributory pension system.

Thomas F. Griffin, Lawrence, in behalf of the Massachusetts Permanent Firemen's Association, presented Secretary Daniel J. Looney, of the state association, with a gold life membership certificate in the permanent men's organization.

Captain John H. Day, Lynn, reported for the auditing committee, and Lieutenant Michael J. McGonagle, Boston, reported as chairman of the legislative committee. Captain Henry Hilton, Gloucester, reported for the credentials committee.

Features of the convention were a baseball game between the Holyoke and Springfield Fire Department teams which was won by the former, a concert and vaudeville show in the Holyoke City Hall, and a banquet held under a tent.

Edward J. Coveney, of Boston, reported as Commissioner of the $18,000 relief fund.

The honor roll of deceased members showed that during the past year there were twenty-eight deaths of members of the association and four deaths of members of the ladies' auxiliary.

Report of Legislative Committee

Following is the report of the Legislative Committee for the years 1934:

During this session approximately sixty bills affecting the firemen of Massachusetts were introduced and acted upon by the legislature.

Several bills of importance were passed at this session. Among them was a bill abolishing all non-contributory pension systems after December 31, 1937. This bill will not affect any member that is under any pension system on that date. It will only affect those who become members after the above mentioned date.

Another bill of importance is a bill which provides for the payment of property damage up to one thousand dollars to indemnify drivers of fire apparatus that are involved in accidents while acting in the performance of their duties.

A bill changing the law relative to reinstatements of men discharged or suspended as a result of automobile violations was also passed. The new law gives the Commissioner of Civil Service discretionary power to reinstate a man who has been convicted of violations of any of the automobile laws.

A bill providing that absence from the service for a period of less than six months would not act as a separation from the service was also passed.

The law relative to right of way of fire apparatus was amended and clarified.

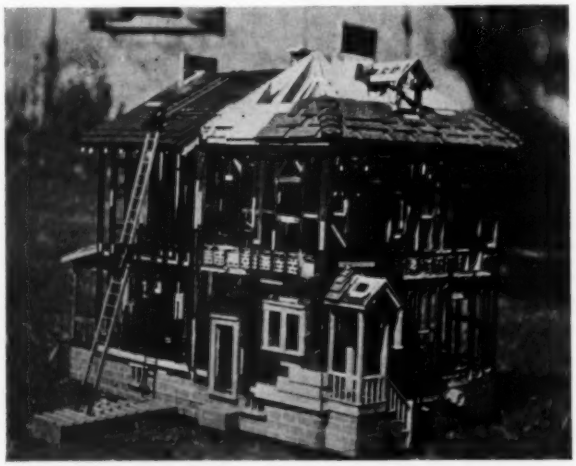
Several matters relating to salaries, civil service, removals and suspensions were considered by the legislature.

Good Building Methods Shown

Assistant-Chief Alex Green, of the Morris Township, N. J., Fire Department has recently completed a model house for the use of the department. The model is 22 inches by 28 inches by 28½ inches in height, and is built to a scale of one foot to the inch. It is mounted on casters and a platform is provided so that the house can be moved about and viewed from any side by the audience.

The model is in two sections. One section shows the approved type of construction required under Building Codes, resulting in greater structural strength and designed to prevent the rapid spread of fire through the building. The other section shows the type of construction usually referred to as "Balloon frame," which is common where there is no Building Code.

Different types of roof framing and covering are shown. Cut-away sections show floor construction, sheathing, etc. The different parts of the structure are neatly labeled, indicating the names of the various units and showing good and



Model Constructed to Show Good and Bad Building Methods

bad construction and fire hazards. Parts of the building that constitute fire hazards are painted red. The house is illuminated by using small bulbs.

Assistant-Chief Green's object in building the model was to provide a means by which the officers and members of the department could familiarize themselves with the types of building construction prevalent in the community and thus be better prepared to locate the source of the fire and the manner in which fire would be likely to travel in a building. It would also tend to protect the safety of the firemen by their knowledge of which type of building would be more likely to collapse under actual fire conditions.

The model is used for demonstrations and lectures at meetings of the officers and firemen of the five companies composing the volunteer department. It has been used to review actual fires and the manner in which the fires were handled. It is also planned to use the house at fire prevention exhibits to demonstrate to the public the need for a Building Code in the municipality.

A convention of the Massachusetts Permanent Firemen's Association was held recently at Gloucester, Mass. The new officers are President, John M. Galligan, Taunton; Vice-Presidents, John B. Morgan, Waltham, Denis W. Sullivan and George L. Crowley, Salem; Secretary, W. Fred Thomas, Worcester; Treasurer, Thomas F. Griffin, Lawrence; Directors, George Carellas, Springfield, and Everett A. Sawyer, Gloucester.

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36 Extinguishers, Carbon Dioxide
37 Extinguishers, Soda-Acid
38 Extinguishers, Carbon Tetrachloride
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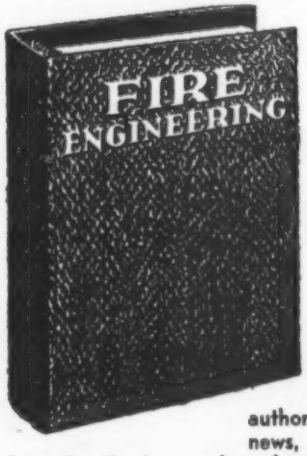

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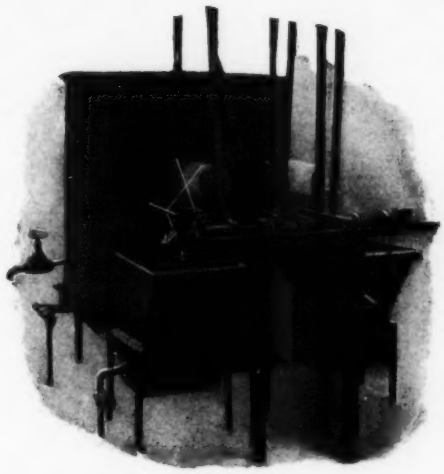
This machine is used to make Fabric Fire Hose rot proof and mildew proof. It treats every individual thread with wax and gum.



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United States Rubber Products, Inc.

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